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ABSTRACT

This compilation of guidelines presents standards for assessment and eligibility determinations and direction for planning services for speech-impaired and language-impaired students in Michigan. The first section, on eligibility considerations, emphasizes the expanded responsibilities of teachers of speech/language-impaired students as they serve in the role of educational communication specialists. The section also discusses pre-referral consultation, determining if a speech/language impairment is a handicapping condition, assessment procedures, eligibility criteria, determining the condition's adverse effect on educational performance, and determining the severity of the condition. The second section presents descriptions of communication rating scales to assess articulation, language, language for the cognitively impaired, fluency, and voice. In each of these areas, the guidelines offer a definition of the impairment, exclusions, assessment considerations, instructions, a severity rating scale, and a teacher input form and scoring instructions. Special considerations for preschool-aged children, bilingual or limited English proficient students, and students with other primary handicaps are presented. Service delivery considerations include least restrictive environment, scheduling, indirect services, direct services, and related services. Criteria for the discontinuation of speech and language services are outlined. Appendices contain various assessment forms and a service delivery model. (Includes a 28-item bibliography and 31 references.) (JDD)

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SPEECH AND LANGUAGE SERVICES

IN

MICHIGAN

SUGGESTIONS FOR IDENTIFICATION, DELIVERY OF SERVICE AND EXIT CRITERIA

DEVELOPED BY
THE MICHIGAN SPEECH-LANGUAGE-HEARING ASSOCIATION

Edited by:
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ELIGIBILITY CONSIDERATIONS

FORWARD

In 1982, the Michigan State Department of Education created the document, Program Suggestions for Speech and Language Services. This document was, and continues to be, the definitive resource guiding the delivery of speech and language services in accordance with Michigan Special Education Rules.

In the mid-1980's, numerous school districts and regional speech-language-hearing associations in Michigan began developing materials and documents to supplement the MDE Program Suggestions. Elaborations of eligibility guidelines were developed to facilitate greater consistency in identification procedures and criteria. Also, in response to changes and advances in the overall delivery of special education services, additional suggestions for speech-language service delivery were made. The result of these local and regional efforts was the existence of numerous documents that supplemented the 1982 Program Suggestions for Speech and Language Services.

A review of these documents was undertaken by a task force consisting of members of the Michigan Speech-Language-Hearing Association and the Michigan Association of Supervisors of Speech and Hearing Services. This task force was led by Sherry Martin, MSHA Vice-President for Public Schools, and had as its goal the selection of one or more documents for statewide dissemination to supplement the 1982 Program Suggestions.

From their review, Ms. Martin's task force selected two guideline documents that met criteria exemplifying clear standards for assessment and eligibility decisions and strong direction for planning services for speech and language impaired students. A commitment was received from Special Education Services of the Michigan Department of Education for financial support for the combination of the two documents into a single set of suggestions to supplement the 1982 Program Suggestions for Speech and Language Services.

The two documents that were combined into the present guidelines are:

Communication Rating Scales, Service Delivery Model and Exit Criteria for Speech/Language Services - Wayne County Intermediate School District in Cooperation with Wayne County L.E.A.s

Guidelines for the Identification of Students with Speech and Language Impairments in Macomb County - Macomb/St. Clair Speech-Language-Hearing Association, supported by Macomb Intermediate School District

Acknowledgement and deep appreciation are due to the professionals who developed the above documents. They are:

Wayne County

Chris Chase - Wyandotte; Terry Dillon - Plymouth-Canton; Kathy Elick-Wolyniak - Northville; Vivian Fahle - WCISD; Yvonne Fiebelkorn - Wyandotte; Colleen Gimpel - Dearborn Heights #7; Bob Hyden - Woodhaven; Lois Johnson - River Rouge; Chris Kosal-Smither - WCISD; Mary Ann Kroeger - South Redford; Chris Law - Dearborn; Dori Loomer - Southgate; Carol McAdam - Dearborn; Connie Mehraban - Wayne-Westland; Laurie Norman - Flat Rock; Susan Oleson - Northville, Anitta Orr - Detroit; Sheila Powell - Detroit; Rita Rauch - Dearborn; Anita Riley - Garden City; Kathy Robinson - Romulus; Tina Saunders - Detroit; Phyllis Scales - Detroit; Lynn Smith - Detroit; Pat Sparrow - Van Buren; Shirley Veldhuis - Lincoln Park; Dona Venne - Livonia; Sue Vokal - Allen Park. The Wayne County effort was coordinated by Elizabeth Loring Lockwood, Consultant, Wayne County ISD.

Macomb/St. Clair Speech-Language-Hearing Association

Joan Cortright, Project Chair - Warren Consolidated; Phyllis Childs - Warren Woods; Denise Deane - Center Line; Karen Formanczyk - Macomb ISD; Mary Ellen Green - Warren Consolidated; Edna Jabbour - Lakeview; Michelle Minturn - Center Line; Joanne Quinn - Clintondale; Marlene Reed - Fraser; Kathy Pistono - Macomb ISD; Karrie St. Pierre - Warren Woods; Ruth Stonestreet - Macomb ISD; Judy Walsh - Clintondale.

The privilege of combining the two documents was shared by Elizabeth Loring Lockwood, Consultant, E.L.L. Consulting Services and Kathleen S. Pistono, Consultant, Macomb ISD. Elizabeth Lockwood was formerly employed at Wayne County ISD.

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INTRODUCTION

In Michigan public schools, speech-language services are provided to students who have "handicapping" communication impairments. To be "handicapping," it must be shown that the impairment adversely affects educational performance. The linkage between the speech and/or language impairment and educational performance must be clearly defined, and the adverse effect must be documented.

This focus on educational performance has had a profound effect on the manner in which public school Teachers of the Speech and Language Impaired identify, evaluate, and instruct students with communication impairments. It has resulted in much greater attention to the educational contexts and demands experienced by students with communication impairments. This, in turn, has fostered many changes in the ways that assessment and treatment are conducted.

Assessment must include observations of classroom structure and curriculum as well as individual student communication skill strengths and weaknesses. To insure that assessment considers the educational effects of an impairment, the student's teacher is a recommended partner in assessing eligibility.

Effective treatment must be closely referenced to the educational context and tasks of each student. Treatment options such as consultation and collaborative instruction are supplementing traditional clinical service models. To accomplish more effective treatment and generalization of learning, students' teachers and parents are enlisted as active intervention partners. Treatment targets include making changes in the educational context that facilitate optimal communication performance by students in addition to developing specific communication skills within students.

These changes are resulting in significant modifications in the responsibilities and activities of the Teacher of the Speech and Language Impaired. Expanded responsibilities and opportunities include participating in pre-referral consultation, providing consultation as a legitimate service delivery option for individual students, and forming partnerships with classroom teachers to provide classroom based and curriculum referenced instruction. Familiar responsibilities and activities such as communication assessment are becoming more sophisticated with the proliferation of newer norm-referenced communication evaluation tools and procedures. Curriculum referenced assessment approaches are supplementing traditional skills based assessment. The imperative to consider the educational context is requiring increased skill in sharing information with teachers to aid identification and treatment decisions.

One outcome of the expanded responsibilities and activities of the Teacher of the Speech and Language Impaired is the emergence of a different role in the schools - a role more akin to that of an educational communication specialist than that of separate

clinical service provider. This shift toward a new, more encompassing role is an exceedingly positive movement. In this role, there is greater potential for providing more far reaching, relevant, and effective services to communicatively handicapped students. This is a role that increasing numbers of public school Teachers of the Speech and Language Impaired are beginning to adopt.

To facilitate the transition to more educationally based speech and language services, this document offers guidance for Teachers of the Speech and Language Impaired to assist in undertaking new responsibilities and to refine the practice of familiar activities.

PURPOSE OF THIS DOCUMENT

1. To suggest how the Teacher of the Speech and Language Impaired may participate in educational problem solving through the Pre-Referral Consultation process.

2. To recommend procedures to be used for the assessment of speech and language impairments.

3. To define a common set of criteria for the identification of speech and language impairments.

4 To recommend ways of documenting the adverse effect on educational performance resulting from a speech and language impairment.

5. To establish a common set of criteria for the determination of the severity of speech and language impairments. This information would assist in planning the educational resources that must be mobilized to enable the student to succeed in his/her educational program.

6. To propose a variety of service delivery options to treat speech and language impairments.

7. To recommend a common set of exit criteria for the discontinuation of speech and language services.

1. PRE-REFERRAL CONSULTATION

A 1987 interpretation by the Special Education Services division of the Michigan Department of Education, entitled "Pre-Referral Consultation," permits certain special education personnel to participate in educational problem solving activities on behalf of non handicapped students. While this process is called "Pre-Referral Consultation," the title should **not** imply that a special education referral is an inevitable outcome or a desirable end of the process. The process enables special education personnel to share their instructional expertise with general educators to address potentially solvable educational difficulties.

To implement "Pre-Referral Consultation," many schools establish Child Study teams. Such teams may consist of, but not be limited to, the following members:

1. the building administrator
2. a classroom teacher
3. a school psychologist
4. a teacher of the speech and language impaired
5. a school social worker
6. other professionals providing direct education services to the child

A student would be brought to the attention of the Child Study team by the classroom teacher. See Appendix A for a sample form. The team would evaluate school records, intervention strategies used and teacher observations.

School records that might be reviewed include the following:

1. pertinent medical information: allergies, extended illness, medication, results of vision/hearing screenings
2. confidential files: reports on additional testing, social worker intervention, previous child study reports
3. attendance
4. grades
5. teacher comments on classroom participation, listening skills, ability to communicate
6. group achievement testing data/reading tests
7. other school services
8. number of school changes
9. information about the child's cultural and linguistic background

The Teacher of the Speech and Language Impaired possesses a considerable fund of knowledge and expertise that can be brought to bear during the Pre-Referral Consultation process. Understanding how communication skill weaknesses interact with the communication skill demands of schooling can lead to practical classroom solutions that enable communicatively "at risk" students to successfully perform. Also see pages 76-77.

The cause of an educational (communication) problem does not necessarily reside within the student, but results from the interaction between the student and the educational environment. Recognizing this enables the Teacher of the Speech and Language Impaired and the general education teacher to analyze the environmental factors that can suppress or enhance the student's communication performance. From this analysis can come practical suggestions for adjusting the educational setting to accommodate the individual student's communication learning style and needs.

The following areas should be considered in suggesting strategies for modifying the educational environment to meet students' communication styles and needs.

The Classroom Curriculum - Factors that might be addressed include the amount of curricular emphasis on the development of speaking and listening skills. An increase in classroom experiences designed to foster skill development in listening and speaking may enhance the performance of students with "wobbly" language skills. The type of reading instruction and written language demands might also be analyzed, and alternative approaches to reading instruction would be suggested for students with language learning styles incompatible with particular instructional strategies.

The Classroom Structure - Factors that might be considered include the opportunities for communication skills to be practiced during student-to-student interactions. Classrooms that incorporate Cooperative Learning practices are conducive to the frequent use of communication skills in group learning activities or student initiated student-to-teacher communication.

The Instructional Experiences - Factors that might be considered include the emphasis on "real" experience, hands-on, manipulative, multisensory, visual representational instructional activities. An emphasis on these kinds of learning activities is essential for students with weaker language skills.

The Teacher's Language Style - Factors that might be considered are the demands placed on students' listening and language processing skills by variations in teacher language style, including rate, grammatical complexity, abstractness, and utterance length. These variables might be modified to enable a student with weak processing skills to perform more successfully in the classroom.

The Use of Time in the Classroom - The major factor in this category is the provision of ample time for students to process language information and to formulate and produce language to convey meanings.

By participating as a member of an educational problem solving team, the Teacher of the Speech and Language Impaired may be instrumental in helping teachers develop classroom environments that enhance communication skill development and ensure successful achievement by students with marginal communication skills.

It is after there have been attempts to modify the educational setting to match the child's needs and learning styles, and these attempts have not met with success, that a special education referral would be initiated.

DETERMINING IF A SPEECH AND LANGUAGE IMPAIRMENT IS A HANDICAPPING CONDITION

Speech-language pathologists are professionally trained in the assessment and treatment of communication impairments. Speech-language pathologists who work in Michigan public schools (Teachers of the Speech and Language Impaired) must apply their knowledge and skills to a select portion of the population of children who exhibit speech and language impairments. These children have speech and language that handicaps them in participating in or benefiting from the educational process.

Understanding the difference between an impairment of functioning and a handicapping condition is critical to the appropriate identification of students eligible as speech and language impaired under Rule 340.1710. The World Health Organization (1980) proposed a framework that can facilitate this understanding. Critical concepts are Cause, Impairment, Disability, and Handicap. The following table outlines these concepts as they may relate to a speech and language impairment.

Cause	Definition	Example
Cause	Disruption of normal body process	Congenital injury, disease (Disruption of fetal development)
Impairment	Any loss or abnormality of psychological, physiological or anatomical structure or function	Cleft Palate - Velo-pharyngeal insufficiency
Disability	Any restriction or lack (resulting from an impairment) of ability to perform an activity in the manner or within the range considered normal for a human being.	Articulation problem- Nasal emission of consonant phonemes, compensatory misarticulations, nasal resonance prevails
Handicap	A disadvantage for a given individual (resulting from an impairment or a disability) that limits or prevents the fulfillment of a role that is normal (depending on age, sex, social, cultural factors) for that individual.	Unintelligible speech limits participation in classroom discourse

The cause creates the condition, or impairment. The impairment creates the disability, or learner-limiting inability, and this in turn creates the handicap, the impact on the speech and language impaired individual's ability to function in school or society. The handicap is the concern of special education. When an impairment is so severe that it

limits the student's abilities to learn in a normal fashion, then special instruction and accommodations are necessary for the student to access education opportunities.

This framework can be used to promote the understanding that a speech and language impairment, in and of itself, is not necessarily a handicap. It is a handicap to the extent that it "limits" or "prevents" the student from participation in his/her role as an active communicator in the educational process. Within this context, documenting the "adverse effect on educational performance" is an understandable requirement in determining if a speech and language impairment is a handicapping condition. Additional information regarding the determination of an adverse effect on educational performance can be found on Pages 13-15 of this document.

2. ASSESSMENT PROCEDURES

Following the optional Pre-Referral Consultation activity, a special education referral may be initiated. This referral is the first step in the process leading to determination of eligibility.

A Collaborative Process

It is worth emphasizing that a speech and language evaluation is a team endeavor and is comprised of more than just individual test results. In order to demonstrate that the speech and language deviation has an adverse effect on educational performance, evaluation data must be collected from other members of the Multidisciplinary Evaluation Team (MET), namely, the student's teacher. The teacher is the principal provider of information regarding the effect on educational performance. Therefore, he or she assumes a responsibility equal to that of the Teacher of the Speech and Language Impaired in recommending eligibility.

As a member of the Multidisciplinary Evaluation Team, the teacher must offer information regarding the child's speech and language functioning level within the classroom. Important considerations should be: 1) the child's ability to process information (academic and social information) and 2) the child's ability to express information, noting the quality and frequency of speech and language production. Teacher-classroom checklists can be used to structure the information collection process from teachers. Teacher input forms for each speech and language disability are included in every section of the Severity Rating Scales.

The second necessary element is the opportunity for Parent Input. This is especially critical for the preschool child. Parents can provide valuable information regarding the child's communicative behavior in various settings. It is suggested that the Teacher of the Speech and Language Impaired listen to parental concerns to gain clues about the level of development at which the child functions. Further information may be gathered through the Parent Input form (included in this document) which can become part of the MET data base for goals and objectives. See Appendices F and G.

Both the Teacher Input and the Parent Input will give the Teacher of the Speech and Language Impaired essential information regarding the child's communicative

performance. The Teacher of the Speech and Language Impaired should analyze this information to assist in selection of appropriate evaluation instruments. The evaluation instruments used will consist of norm referenced tests or scales and informal procedures. The following section describes recommended procedures for the individual assessment portion of the Multidisciplinary Evaluation.

Evaluation procedures must result in a description of the speech and language characteristics manifested by the student and the effect of the student's speech and language deficits on his/her educational performance. For pre-school children, not in a school program, the effect of the deficit in the home environment is considered because the home is the child's primary educational setting. Delays or deviancies in communication skill development that significantly interfere with the child's ability to engage in interactions in the home would result in an adverse effect on educational performance. Parent/home communication checklists can be used to structure the information collection process from parents. Samples are included in Appendix G.

Norm Referenced Assessment

The identification of speech and language impairments must include the use of appropriate norm referenced, standardized, valid and reliable tests of a pertinent spectrum of communicative abilities. It is from norm referenced assessment that a comparison may be made between a referred student's communication skills and the skills expected of students of the same chronological or developmental age. Norm referenced tests and/or scales are critical for answering the basic identification question: "Is this student's level of communication skill development different from that expected for his/her chronological or developmental age?"

The evaluation procedures may begin with the administration of a broad spectrum standardized test to assess the primary area of suspected impairment. An example of such an instrument is the Test of Language Development-Primary or Intermediate. These are useful initial assessment tools because they are adequately standardized and include subtest tasks that sample multiple language performance skills; comprehension and production, syntax, semantics, and morphology. From the results of these general identification tools, hypotheses can be generated relative to:

a) whether or not the student demonstrates skills different from his age peers, and
b) in what area of language performance the student may manifest specific deficits (e.g., comprehension and/or production, semantics, syntax, etc.)

Assessment does not end with the administration of the broad spectrum test. From the information generated from a test such as the TOLD, additional assessment decisions will be made. For example, if the results of the TOLD suggest a comprehension deficit, more specific assessment of the student's comprehension skills would be indicated. Another norm referenced measure such as the Test for Auditory Comprehension of Language-Revised could be used. Follow up assessment provides verification of the results of the initial general test, satisfies the "2 tests or subtests" requirement, and provides information that can assist in planning the student's intervention program. See Appendix J.

Criterion Referenced Assessment

In addition to these assessment procedures that supply primarily identification information (that is, answering the question "Is the student's level of skill really different from that of his similar aged peers" or, "Can this student be identified as a handicapped student"), other assessments may be administered to provide more specific diagnostic or educational planning information. Criterion-referenced assessment may be conducted to determine exactly which specific speech/language skills have been acquired and which skills must be taught. The Washtenaw Speech and Language Curriculum assessment is one example of a criterion-referenced assessment.

Curriculum-Based Assessment

Perhaps the most important area of assessment addressed by the Teacher of Speech and Language Impaired is curriculum-based assessment. This approach extends the evaluation to consider the student's communication skills and deficits within the context of the language and communication demands of the curriculum and the educational environment. Curriculum-based assessment addresses the following areas:

1. the communication skills and strategies needed by the student to participate in the curriculum,

2. the processes and strategies currently exhibited by the student when communicating within the educational environment,

3. the new skills, strategies or compensatory techniques the student must acquire to be a more competent participant in the curriculum and educational environment, and

4. the curricular modifications that will provide the student with greater opportunities to participate in the educational environment.

This is a relatively new area of assessment and the reader is encouraged to refer to articles by Miller, Nelson, Secord and Simon listed in the reference section of this document.

Functional Communication Assessment

As more local school districts embrace the challenge of "including" students with severe developmental disabilities, Teachers of the Speech and Language Impaired must acquaint themselves with appropriate procedures for assessing pre-school and severely cognitively impaired students.

Very few standardized procedures exist that satisfactorily evaluate the communication skills of pre-verbal or non-verbal students. Therefore, it is necessary to employ structured observations and interview techniques in determining the communication

forms, functions and intents of these students. Please see Appendices D and U for suggested frameworks and additional References for the Cognitively Impaired.

Informal Assessment

Other informal procedures may be administered to supplement the information obtained from norm-referenced assessments. For example, in articulation assessment, "deep testing" might be done to measure phoneme production in various phonemic contexts. This information is useful in determining a starting point in therapy. However, this testing would not be done if the initial identification tests did not indicate that the student's sound production was inappropriate for his developmental age level.

Informal assessment is a necessary component of determining eligibility as language impaired. A language sample that demonstrates inadequate language functioning is required under Rule 340.1710. Other informal assessments may be employed after a student has been recommended for speech-language therapy services. However, when informal measures are administered during the eligibility determination process, information from them can be used in consideration of the student's eligibility. See Appendix K.

Multiple Samples of Communication Performance

Many of the tests used in the assessment of speech and language performance are designated "discrete skills" tests. They sample molecular or isolated, specific component communication skills (i.e., word recognition) in artificial contexts, divorced from actual communication/linguistic contexts, and in highly constrained interactive circumstances. Because of the nature of these tests, they may produce inaccurate or incomplete estimations of students' communication abilities and fail to reflect a student's actual level of language competence.

Given the discrete skills or molecular nature of many tests, it is especially important to sample target communication skills in multiple contexts and through varying elicitation techniques so that a valid and representative sample of the student's communication skills can be obtained. This is the rationale for the collection of a spontaneous language sample as well as the requirement for demonstration of inadequate functioning on more than one test or subtest. A spontaneous language sample should be analyzed to determine if it provides corroborative evidence for the presence of a communication impairment. For example, if an impairment in productive syntax is indicated by the composite score of the TOLD, supporting evidence should be found in the spontaneous language sample. Suggested procedures for the collection and analysis of spontaneous language samples are found in Appendix K.

3. COMMON CRITERIA

Use of Developmental Age

A discrepancy model is implied in Rule 1710 for the identification of a speech and language impairment. In a discrepancy model, evidence of differences between expected abilities and actual abilities is sought. Both subrule (a) and (d) refer to age appropriateness as the standard for expected abilities. It is recommended that the discrepancy standard used in these guidelines refer to developmental age level rather than chronological age. When considering whether the delays or differences a student manifests in his communication abilities are inappropriate for his age, the reference is to his developmental age, specifically to his level of development in non-verbal cognition. If a child were functioning at the 50th percentile in the area of non-verbal cognition, his expected level of speech and language abilities would also be near the 50th percentile. Likewise, if a youngster is functioning at the 15th percentile in non-verbal cognitive ability, his level of speech and language functioning would be expected to be similarly depressed, or at about the 15th percentile. Therefore, speech and language assessment findings at the 15th percentile would not be considered discrepant with the youngster's developmental level or age. In this case, there would be no difference between expected abilities and actual abilities.

Defining Non-Verbal Cognitive Ability

It is important to note that the standard for expected ability is the student's level of non-verbal (non-language) cognitive ability. This level should be defined by tests of cognitive ability that are not contaminated by the student's communication impairment. Ideally, the cognitive ability of students with communication impairments should be measured with non-verbal intelligence tests. However, when psychologists use measures of cognitive ability that provide Verbal IQ, Performance IQ and Full Scale IQ scores, the highest IQ score, usually the Performance IQ, should be the standard of comparison because the Verbal and Full Scale scores are affected by the student's deficits in verbal communication. In the rare instances where the Full Scale score is higher than the Performance or Verbal scores, use the Full Scale score as the standard for measuring the discrepancy. When psychological testing is not available, the Teacher of the Speech and Language Impaired may obtain an estimate of non-verbal cognitive ability using procedures discussed in the section, "Determining Cognitive/Developmental Level."

Use of Standard Score Information

In determining a discrepancy, it is important to use tests of communication performance having scores that have been converted into standard score equivalents. This means that the raw score data has been mathematically transformed into "normalized" data, or converted into numbers (standard scores) that conform to a normal distribution (bell shaped curve) of scores. (See Appendix C.). Using a normal distribution, it is possible to take a student's achieved standard score and place it on the distribution to determine how far from the average or mean the student's score falls. The farther away it is from the average, the more unusual it is, and the farther it falls below the average, the more likely it represents impaired performance. Using

standard score comparisons makes it possible to determine whether there is a discrepancy between expected performance and actual performance.

Determining the Discrepancy

How far from the average must a score be before it is considered a reflection of impaired performance? A score must fall more than one standard deviation below the mean to be considered unusual. For the purposes of these guidelines a variance of at least one and one third or more standard deviations below the mean (9%ile, Deviation Quotient of 80) is recommended to support initial eligibility. The criteria recommended here incorporate this standard of at least one and one third or more standard deviations below the mean into a severity rating matrix. The matrices include additional factors such as effect on educational performance, recognizing that test performance alone cannot be the sole determiner of the existence of a communication handicap. The understanding and use of information about the relative standing of a student's performance on a normal distribution is an important component of the eligibility determination process. The criteria of at least one and one third or more standard deviations below the average is recommended for determining whether a discrepancy exists between expected and actual performance.

Comparing Communication Scores with Cognitive Ability

In determining whether this discrepancy exists, the relative standing of a student's non verbal cognitive ability on a normal distribution must be considered. If the student's cognitive ability falls within the average range, his expected communication performance should also be within the average range. However, if the student's cognitive ability falls below or above the average range, and his communication performance also falls in a range similar to his non-verbal cognitive standing, a discrepancy between actual and expected performance would not be indicated. A discrepancy between actual and expected performance would be indicated when a student's communication performance falls significantly (1 1/3 standard deviations) below his own measured level of non-verbal cognitive ability. The use of standard scores for describing both communication performance and cognitive performance permits this type of comparison.

Population Considerations

It is necessary to exercise caution in using standardized tests which have been normed on populations different from that of the student being tested (for example, the socio-economic makeup of some communities in Michigan). This is recognized by Teachers of the Speech and Language Impaired serving different communities within the state, and the interpretation of test results is modified in accordance with this knowledge. When possible, the establishment of local norms is encouraged so that appropriate normative comparisons may be made.

Cautions

In addition to the consideration of the relative standing of communication test scores earned by a student, critical components for determining eligibility include the results

of informal assessments, systematic observations of parameters of voice and fluency, and a determination of effect on educational performance.

While there have been significant advancements in the measurement of communicative performance, the state of the science is very incomplete. For example, few standardized tests are presently available that adequately measure pragmatics or the comprehension and production of extended discourse. Therefore, it is suggested that other forms of assessment be employed, including observations and sampling of communication performance in real educational settings and interactions. When inadequate or deviant communication performance is noted, and that performance is at variance with standardized test results, appropriate weighing should be applied to the informal assessment in determining severity and eligibility. If it cannot be demonstrated that the differences manifested through assessment and observation exert an adverse effect on educational performance, a recommendation of eligibility cannot be suggested. Possibly the most important criterion in determining the existence of a speech and language impairment is the effect on educational performance.

4. ADVERSE EFFECT ON EDUCATIONAL PERFORMANCE

In order to be deemed a handicap, communication impairments must exert an adverse effect on educational performance. Educational performance refers to the student's ability to participate in the educational process, and must include consideration of the student's social, emotional, academic, and vocational performance.

Two issues pertaining to communication in educational settings should be considered in attempting to determine if a communication problem is an educationally handicapping condition. The first involves the fact that language is the primary medium of education. To the extent that a student has not mastered the skills necessary to understand, express and use language, the student's access to the primary medium of education is limited. The second is that communication is the process through which education takes place. To the extent that a speech and language impairment affects the student's ability to participate in active, interactive communication with others in the educational setting, (including peers as well as adults), the student is prevented from participating in the process of education. Keeping in mind the interaction of the speech and language problems with the medium and process of education will facilitate the consideration of an adverse effect on educational performance.

Several misconceptions regarding the adverse effect on educational performance must be addressed. The first involves a restriction of the definition of educational performance. The definition of educational performance must not be limited solely to consideration of academic performance. The student does not need to be below grade level or failing in an academic area to be eligible as speech and language impaired. Examples of students who may be succeeding academically but are still eligible as speech and language impaired include the following:

A bright student who is dysfluent and has related problems contributing to class discussions, giving book reports, and answering questions orally.

A first grader who is ahead of peers in many areas, but has non-developmental articulation errors that affect intelligibility during "show and tell," phonics instruction, and other educational activities requiring oral responses.

A third grader who is an above average reader, but whose voice disorder inhibits his classroom verbal interactions, resulting in reluctance to give book reports, do oral reading and join in class discussion.

Another misconception is that any deviance in communication constitutes a handicap. A speech or language deviation does not necessarily constitute an adverse effect on the student's ability to function in the educational setting any more than deviations like mild muscle incoordination or poor eyesight necessarily interfere with educational functioning. Students having muscle incoordination or poor eyesight are not automatically determined to be POHI or VI. The deviation in functioning must be shown to interfere with the student's ability to perform successfully in the educational setting. Similarly, the speech and language deviation must be shown to interfere with the student's ability to perform in the educational setting before Speech and Language Impaired eligibility is determined..

The effect of the speech and language deviation on social/emotional development also must be carefully considered. The key issue to be addressed is whether the deviation interferes with the student's ability to establish and maintain social relationships and experience sound emotional development. Self consciousness about a speech or language deviation or teasing by peers does not by itself necessarily constitute an impediment to social relationships and emotional development. Careful documentation of limitations of social relationships and sound emotional development must be directly linked with the speech and language deviation to establish the existence of an adverse effect on educational performance.

The documentation of effect on educational performance must clearly indicate two things: the manner in which the student's communication deficit affects his performance in the educational setting, and the adverse nature of the effect. Also, in considering the effect on educational performance, the student's present educational setting must be the point of reference. The idea that while a student's communication deviance is not currently causing an adverse effect but may cause an adverse vocational effect in the future does not allow us to determine that he is handicapped now.

Documentation of the effect on educational performance can be obtained by having the regular education teacher complete a checklist detailing behaviors of the student in the classroom which may indicate an adverse effect on educational performance. Checklists might include specific questions such as : "Does the student participate in class discussion?", "Does the student understand verbal directions?", "Does the

student make errors in spelling on the same sounds he misarticulates?" Responses on the checklist must be related to the speech and language impairment and judged to be indicative of a significant problem.

Within this document are suggested checklists to document adverse educational effect related to aural/oral communication.

5. DETERMINATION OF SEVERITY

The fifth stated purpose of these guidelines is to establish a means for determining the severity of speech and language impairments which will assist in planning the educational resources that must be mobilized to enable the student to succeed in his educational program. Severity rating procedures and scales that have been developed and employed by other school districts throughout the United States were reviewed. The format of the Howard County, Maryland Public Schools was judged to possess the greatest utility of the reviewed scales, and was selected for modification to meet the needs of Teachers of the Speech and Language Impaired in Michigan.

A severity rating scale reflects communication skills on a continuum, ranging from adequate on one extreme to inadequate at the other. Along that continuum, communication impairments can be classified from mild to severe. This classification process integrates descriptive information about the student's communication skills and their effects on educational performance.

The resulting classification along the severity continuum can be used in two ways:

> First, the classification provides a determination of eligibility. **Using the severity rating scales, students will be eligible as speech and language impaired if they receive at least a "Mild" rating, and score at least a "4" in the "Adverse Effect on Educational Performance" section.**
>
> Second, the classification can assist the IEPC in recommending the combination and intensity of programs, services and other resources that may be instituted to enable the student to succeed in his educational program. It is recommended that a flexible, multidisciplinary, and cooperative approach be adopted in planning for children with communication impairments. A classification along the severity continuum provides the IEPC with additional information that facilitates the educational planning process.

The Communication Rating Scales in the following sections of these guidelines can be used to make a classification of severity. Separate rating scales are provided for Articulation, Fluency, Language and Voice impairments. For the purpose of determining eligibility, it is necessary to rate the student on only one scale, even though some students may manifest communication impairments in more than one area. The scale chosen should reflect the impairment area that **most** adversely affects the student's communication performance. However, in making recommendations for

speech-language services, the existence of multiple areas of communication impairment should be considered.

The rating scales are based on a discrepancy model. Students who are determined to have a speech and language problem demonstrate a significant discrepancy between their speech/language performance and their expected performance, based on their cognitive/developmental level.

Since the rating scales are based on a discrepancy model which references cognitive/developmental level as the discrepancy standard, the following section will describe how to determine cognitive/developmental level. See the next section and Appendix C.

Determining Cognitive/Developmental Level

Throughout the model, scores on speech and language tests are compared to "developmental age" or "cognitive ability". Levels of cognitive functioning may be obtained in several ways:

a) Many students with other primary disabilities already have scores available from individual intellectual assessments (e.g., LD, EMI, TMI, SMI, SXI, EI).

b) The Teacher of Speech and Language Impaired or other evaluator (such as a Teacher Consultant) may administer assessments that are indicators of cognitive functioning such as:

The Woodcock-Johnson, Psycho-Educational Battery Reasoning Cluster

The Woodcock-Johnson Psycho-Educational Battery-Revised:

Fluid Reasoning Cluster

Visual Processing Cluster

Test of Non-verbal Intelligence

Matrix Analogies Test

c) The Teacher of Speech and Language Impaired may review the student's records for evidence of group psychological tests and use these results.

d) After observation, conference with the teacher and his/her agreement, the Teacher of Speech and Language Impaired can assume the student's cognitive abilities are within normal limits and use an IQ of 100.

e) The student may be referred to a school psychologist for intellectual assessment if necessary.

Some intelligence tests provide more than one quotient. For example: the Weschler Intelligence Scale for Children - Revised (WISC-R) provides three quotients -- Verbal I.Q., Performance I.Q. and Full Scale I.Q. The highest I.Q., usually the performance, is used for comparison with the student's speech/language ability level to determine severity.

GUIDE TO PLOTTING AND COMPARING SCORES

Rationale

When assessing various populations, it is often both necessary and helpful to determine general cognitive functioning levels so that discrepancies between ability and language achievement can be determined.

Because it is not feasible to administer a standardized and comprehensive intellectual assessment in every case, there are some parameters that may be used to obtain a pragmatic assumption of general functioning level. **This approach is not to rule out the necessity for a standardized psychological evaluation if it is deemed necessary by appropriate personnel**. Use of a level of cognitive functioning is, however, a tool to be employed, with obvious caution, to assist the Teacher of Speech and Language Impaired in formulation of service delivery needs.

More specifically, the charts in Appendix E were designed to plot any intellectual assessments already completed, as well as to offer some "general cognitive indicator" measures to aid in baselining functioning levels to have points of comparison for various speech and language assessments. They are not all inclusive or exhaustive, but they are a working model that may be modified as necessary.

To make comparisons of scores easier, the following formula may be used to convert scores. These formula have some psychometric shortcomings, but do allow for general comparisons of levels of discrepancy.

1. If a test/measurement provides age equivalents, these can be converted to extrapolated ratios by the following formula:
   a. Convert age equivalency to months.
   b. Compute child's age in months.
   c. Divide age equivalency by chronological age.
   d. Multiply by 100.

A.E. (mos) ÷ C.A. (mos) = Ratio X 100 = estimated cognitive functioning level

2. If standard scores are given (use conversion charts included to convert to mean of 100 and a standard deviation of 15), an age equivalency can be arrived from the following formula:
   a. Convert C.A. to months.
   b. Multiply by test standard score.
   c. Divide by 100.
   d. Divide amount by 12.

C.A. (mos) X Standard Score ÷ 100 = A.E. (in Mos.) ÷ 12 = A.E. in years

NOTE: These are based on a normal curve assumption.

A.E. = age equivalency C.A. = chronological age

Developed in cooperation with
L.A. Hunt, School Psychologist

COMMUNICATION RATING SCALES

Each of the following sections include:

- A definition of the impairment
- Exclusions
- Assessment considerations
- Instructions
- The severity rating scale
- Teacher input form and scoring instructions

ARTICULATION/PHONOLOGY

Rule 340.1710 of the Michigan Special Education code provides the following definition of an articulation impairment:

(a) Articulation impairment, including omissions, substitutions, or distortions of sound, persisting beyond the age at which maturation also might be expected to correct the deviation.

Working Definition:

It is commonly believed that an articulation impairment exists when the student produces sounds, syllables, or words incorrectly so that listeners do not understand what is being said or pay more attention to the way the words sound than to what they mean. An articulation disorder must adversely effect the student's educational performance. Affected areas may include social interaction, behavior, emotional development, academic, vocational performance and participation in classroom activities and discussions. Articulation errors may be characterized by the omission, distortion, substitution, addition and/or sequencing of speech sounds.

An articulation impairment does not exist when:

1. **Sound errors are consistent with developmental age or are within normal articulation development.**
2. **Articulation differences are due primarily to unfamiliarity with the English language, dialectical differences, temporary physical disabilities or environmental, cultural or economic factors.**
3. **The articulation errors do not interfere with educational performance.**

Assessment Considerations:

An articulation evaluation gathers information about sound production in words, sentences, and discourse. Evaluation procedures should include imitative as well as spontaneous speech sampling. Analysis of a student's speech should consider phonological process development, sound production, and sound sequencing skills.

Procedures:

1. Administer a formal articulation test. (See Appendix I.)
2. Elicit a spontaneous speech sample to assess intelligibility and phoneme production patterns in connected speech.
3. Examine oral/motor structures and functioning.
4. Evaluate stimulability.
5. Collect information from Teacher/Parent checklists.

6. If needed, assess hearing sensitivity and auditory discrimination.
7. It is recommended that a broad based language screening test be administered to explore the possibility of a concomitant language impairment.

Articulation Profile Instructions:

Use the chart provided to compare the child's chronological/developmental age to his articulation performance. If you believe the cognitive ability of the student is within normal limits, (approximate IQ of 90 or above), use his chronological age as the expected level of articulation performance. If you believe the student's ability may be below his chronological age, you will need an estimate of his level of cognitive functioning to compare to his current performance. See page 18 for methods to determine cognitive/developmental level. If the developmental age is below chronological age, use the developmental age on the articulation profile.

(1) Using the form provided, draw a horizontal line on the articulation profile indicating the developmental age/chronological age of the student.

(2) Draw horizontal lines indicating one year and two years below the developmental age/chronological age of the student.

(3) Draw an "X" on the top of the phoneme bar to indicate error phonemes. The top of the phonemes bar indicates the approximate mastery level of the children in the sample(s).

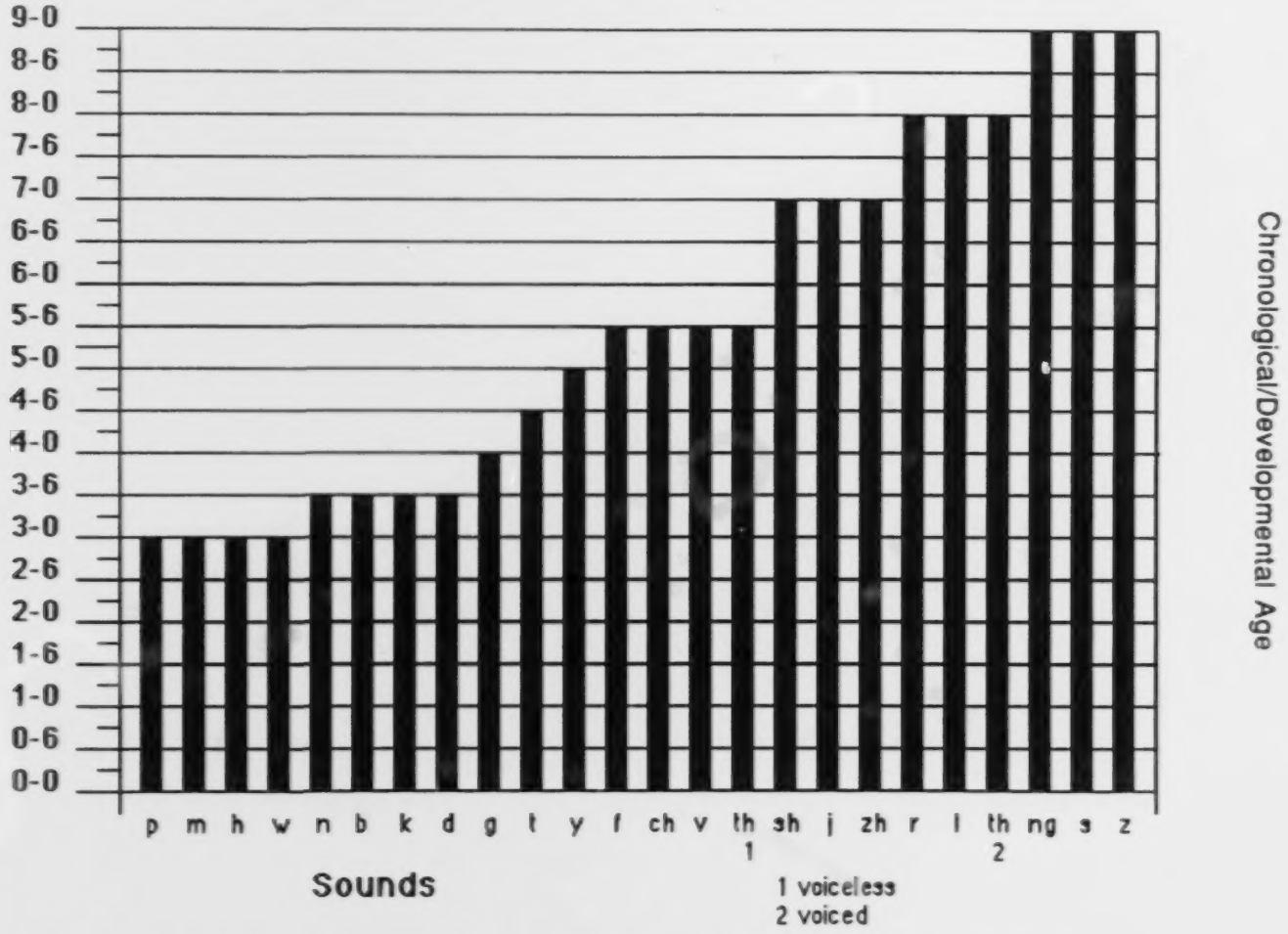
(4) Identify any error phonemes that are 6 months or more below the student's developmental age/chronological age.

(5) Phoneme errors that fall 6 months to one year below the student's developmental age/chronological age are assigned a "2" in the sound production category of the Articulation Rating Scale. Errors falling one to two years below are assigned a "3" and errors falling more than two years below are assigned a "4".

John E. Bernthal and Nicholas W. Bankson, Articulation Disorders (Englewood Cliffs: Prentice Hall., 1981), p. 96.

Name _____ Date _____ SLP _____

ARTICULATION PROFILE



THIS DEVELOPMENTAL SOUND CHART IS BASED ON THE IOWA (Smit) 1986 STUDY. EACH SOLID BAR REPRESENTS A SOUND. IT STOPS AT THE AGE LEVEL THAT 90% OF ALL CHILDREN ARE CUSTOMARILY PRODUCING THAT SOUND. VOWELS ARE USUALLY DEVELOPED BY AGE 3 (Weiss).

Articulation Rating Scale Instructions

1. Circle the appropriate scores for each of the five categories: sound production, stimulability, intelligibility, oral motor function and adverse effect on educational performance.

2. Use normative data for oral motor functioning when available. When unavailable, use professional judgement (e.g. diadochokinetic rate).

3. Do not include regional or dialectic difference.

4. Assess the adverse effect on educational performance utilizing the Articulation: Teacher Input form. The Teacher of Speech and Language Impaired should use the form to interview the teacher regarding the effect on educational performance. The teacher should attempt to cite specific behavioral observations to support "yes" responses. It is scored according to the directions on page 27. This form serves as the classroom teacher's report to the MET and is used to assist in final determination of the severity of the adverse effect on education performance.

5. Compute the total score and circle the total on the rating scale.

Considerations:

The scale is not accurately reflective of the severity of the handicap of younger preschool age children. Additionally, normative data is not complete for phonological processing and oral motor development. In this case, professional judgement needs to be used to determine the severity of the articulation disorder. Also, for the preschool child, parent input would be used to assess the adverse effect on educational (developmental) performance. See "Special considerations for 0-5 year olds" page 52.

Criteria

The total score must fall at least within the Mild range and the score for adverse effect on education must be at least a "4" to support a recommendation of eligibility as articulation impaired.

Student: _____ Date: _____
School: _____ TSLI: _____

ARTICULATION RATING SCALE

	Rating Scales			
	Non-handicapping Condition	Mild	Moderate	Severe
Sound Production	0 No sound errors present or student's speech is characterized by errors that are consistent with normal development.	2 Students speech is characterized by sound errors or phonological processing errors 6 mos. to one year below developmental age/chronological age.	3 Students speech is characterized by sound errors or phonological processing errors from one to two years below development age/chronological age.	4 Students speech is characterized by sound errors or phonological processing errors more than two years below development/chronological age.
Stimulability	0 Error sounds are stimulable for correct production in several contexts.	2 Error sounds are stimulable in at least one context.	3 Although not correct, error sounds more closely approximate correct production.	4 Most error sounds are not stimulable for correct production.
Intelligibility	0 Connected speech is intelligible.	4 Connected speech is intelligible although noticeably in error.	6 Connected speech is occasionally unintelligible.	8 Connected speech is frequently unintelligible without gestures, cues, and/or knowledge of the context.
Oral Motor Functioning	0 The student produces the movement with ease.	2 The student produces the movement with concentration.	3 The student produces the movement with difficulty.	4 The student cannot produce the movement at all.
Adverse Effect on Educational Performance Social Emotional Academic Vocational	0 No interference with the child's participation in educational setting.	4 Minimal impact on the child's participation in the educational setting.	6 Does interfere with child's participation in the educational setting.	8 Seriously limits child's participation in the educational setting.
Total Score	0 2 3 4 5 6 7 8 9	10 11 12 13 14 15 16	17 18 19 20 21 22 23 24	25 26 27 28
Rating Scales	Non-handicapping Condition	Mild	Moderate	Severe

COMMENTS: _____

Teacher Input: Articulation

Student:_____ Birthdate:_____

Teacher:_____ Grade/Program:_____

Your observations of the above student's speech will help determine if there is an articulation problem which is adversely affecting educational performance. Check all that have been observed. Please return this form to the Teacher of Speech and Language Impaired.

	Yes	No
1. Is this student's intelligibility reduced (due to articulation errors) to the extent that you find it difficult to understand what s/he says at times? If yes, check appropriate description: (a) ___3 or 4 words are difficult to understand (b) ___2 or 3 X day can't understand words (c) ___considerable difficulty much of the time	____	____
2. Does this student make errors in writing (spelling) on the same sound symbols that s/he makes the verbal errors on in articulation?	____	____
3. Student's mispronunciations during reading occur on the articulation error sounds.	____	____
4. Does the student appear frustrated when speaking because of her/his articulation errors?	____	____
5. Does the student appear to avoid speaking in class because of her/his articulation errors?	____	____
6. Does the student have problems reading or with readiness activities, because of articulation errors?	____	____
7. Is s/he having problems discriminating sounds?	____	____
8. Do the student's articulation errors seem to create social isolation?	____	____
9. Has the student ever indicated that s/he is having problems producing sounds when speaking or shown concern about her/his sound production?	____	____
10. Has s/he ever corrected any of their own articulation errors?	____	____
11. Does this student's speech problem distract listeners from what he/she is saying?	____	____

It is my opinion that these behaviors: ____ Do not interfere with the child's participation in the educational setting.

____ Do interfere with the child's participation in the educational setting.

Do you have any other observations relating to the communication skills for this student?_____

_____

_____

_____ _____

Date Classroom Teacher's Signature

Scoring Articulation: Teacher Input

Answers to the 11 questions are scored in the following manner:

1. No = 0
   Yes with nothing checked = 0
   Yes with (a) checked = 0
   Yes with (b) checked = 1
   Yes with (c) checked = 2

   If the teacher has checked more than one letter, score only the highest letter checked. Example: if both b and c are checked, the score is 2.

2.	Yes = 1	No = 0
3.	Yes = 1	No = 0
4.	Yes = 1	No = 0
5.	Yes = 1	No = 0
6.	Yes = 1	No = 0
7.	Yes = 1	No = 0
8.	Yes = 1	No = 0
9.	Yes = 1	No = 0
10.	Yes = 0	No = 1
11.	Yes = 1	No = 0

Total ___ Total ___

Add the assigned scores for the total. The maximum score is 12.

Yes = ____ + No = ____ = an assigned total of ____

Total Assigned Values indicate:

0 - 1 = non-handicapping condition
2 - 5 = mild
6 - 8 = moderate
9 - 12 = severe

On the ARTICULATION RATING SCALE refer to the Adverse Effect on Educational Performance section. The obtained score reflects the classroom teachers' professional opinion regarding Adverse Effect. The final assignment of value is determined by the MET with input from all members of the team.

Phonological Processes

Phonological processes describe the ways that young children simplify the production of words that are too complex for them to produce fully and accurately. Because of perceptual and motor constraints, some young children are unable to produce all of the phonemes and phoneme sequences necessary to form complete words. To approximate complete words, children seem to employ patterns or rules that govern their production attempts. These rules, called phonological processes, represent systematic strategies that provide temporary solutions to the problems of perceptual and production complexity. These strategies enable children to systematically avoid phonemes and sequences that are too difficult to produce, exploit phonemes within their current repertoire, and simplify sequences that are beyond their ability to perceive and produce by replacing and rearranging sounds.

These simplification strategies, or phonological processes, are normal in the speech of developing children. However, when the use of these rules or patterns persists beyond the age of expected use, a child may be considered to manifest a phonological impairment. Persistent use of these simplification processes significantly reduces the intelligibility of speech.

The charts on the following page outline the phonological processes frequently seen in the speech of young children. Some information regarding developmental expectations for the processes has been included. It is important to note that no developmental information is available for many of the processes and that the reported developmental guidelines are preliminary.

The Communication Rating Scale - Articulation encompasses observations of phonological processes as well as phoneme production in rating articulatory proficiency.

PHONOLOGICAL PROCESSES

Phonological Process	Description	Example	Developmental Information
A. Syllable Structure Processes 1. Deletion of Final Consonant	Reduction of CVC words or syllables to CV form, not usually sound specific	book →/bʊ/	Children who are developing language normally will begin to include final consonants by age 3.[1]
2. Cluster Reduction	Simplification of clusters of consonants usually by deleting the one that is most difficult to produce	tree →/ti/	Most children (90%) do not use cluster reduction after age 4.[1]
3. Weak Syllable Deletion	Deletion of unstressed syllables	telephone → /tɛfon/	Process does not exist in speech of normally developing children beyond age 4.[1]
4. Glottal Replacement	Replacement of final consonant of a syllable, usually in the intervocalic position, by a glottal stop; may mark the place of a consonant that is deleted	Kitchen → /kɪʔən/	
B. Harmony Processes 1. Labial Assimilation	Substitution of a labial phoneme for a non-labial phoneme due to influence of a dominant labial phoneme contained within the word	thumb → /wʌm/	
2. Alveolar Assimilation	Substitution of a phoneme which is produced with alveolar placement for a non-alveolar phoneme due to influence of a dominant alveolar phoneme within the word	yellow → /lɛ lo/	
3. Velar Assimilation	Substitution of a phoneme which is produced with velar placement for a non-velar phoneme due to influence of a dominant velar phoneme within the word	dog → /gɔg/	
4. Prevocalic Voicing	Substitution of a voiced stop for its voiceless cognate due to influence of the following vowel	pig → /bɪg/	
5. Final Consonant Devoicing	Substitution of a voiceless stop for its voiced cognate due to influence of the silence following the word	bed → /bɛt/	Devoicing of final consonants does not occur after age 3 in normal phonological development.[1]

[1] Phonological Disability in Children, cited by Linda M. Laila Khan, "A Review of 16 Major Phonological Processes," Language, Speech, and Hearing Services in Schools, (April 1982), pp. 77-85.

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Phonological Process	Description	Example	Developmental Information
C. Feature Contrast Processes 1. Stopping	Substitution of a stop for a fricative	sun → /tʌn/	
2. Affrication	Substitution of affricatives for fricatives; usually occurs more often with sibilant fricatives than others	sun → /tsʌn/	Most fricatives should be correctly produced by age 4.[1]
3. Fronting	Substitution of phonemes by others which are produced anterior to the target phonemes; occurs commonly with velar stops	wagon → /wæɡdn/	Reported to no longer be evident by age 4 in normally developing children.[1]
4. Gliding of Fricatives	Substitution of glides for fricative phonemes	soap → /jop/	
5. Gliding of Liquids	Substitution of /w/, and /j/ for /l/ or /r/; simplification process	red → /wɛd/	Majority of children reported to produce correct liquids by age 4.[1]
6. Vocalization	Substitution of vowels for syllabic consonants, most frequently /ɝ/ and /o/	table → /tebo/	Syllabics are usually acquired by age 4.[1]
7. Denasalization	Substitution of stops for nasals; usually affects word-initial and word-medial nasals more than word-final nasals	smoke → /bok/	

[1]Natural Process Analysis, cited by Linda M. Laila Khan, "A Review of 16 Major Phonological Processes," Language, Speech, and Hearing Services in Schools, (April 1982), pp. 77-85.

LANGUAGE

Rule 340.1710 of the Michigan Special Education code provides the following definition of a language impairment:

(d) One or more of the following language impairments: phonological, morphological, syntactic, semantic, or pragmatic use of aural/oral language as evidenced by both of the following:

(i) A spontaneous language sample demonstrating inadequate language functioning.
(ii) Test results, on not less than 2 standardized instruments, or 2 subtests designed to determine language functioning, which indicate inappropriate language functioning for the student's age.

Working Definition

It is commonly believed that a language disorder involves the inadequate or inappropriate acquisition, comprehension, or expression of language in one or more of the following areas: language content, structure or usage. The language disorder must adversely effect the student's educational performance, or in the case of a preschool-aged child, have an adverse effect on the child's development.

A language impairment does not exist when:

1. **Language performance is consistent with a student's non-verbal cognitive development.**
2. **Language differences are primarily due to environmental, cultural or economic factors including non-standard English and regional dialect.**
3. **Language performance does not interfere with educational performance.**

Assessment Considerations

A language evaluation gathers descriptive data on a student's skills in the listener and speaker role.

Receptively, the evaluation should determine the student's ability to:

1. Hear, discriminate, assign significance to and interpret spoken words, phrases, clauses, sentences, and discourse.
2. Understand the intent of the speaker.

Expressively, the evaluation should determine if the student has the ability to:

1. Formulate ideas or thoughts, find words, construct sentences, and produce oral/non-oral language.

2. Use appropriate language successfully to communicate in different speaking situations and for different purposes.

The language evaluation collects data from both formal and informal assessments to obtain a broad view of a child's communication behaviors. Informal assessments may be defined by but not limited to the use of the following:

1 Language Sampling
2. Classroom Observation

When combining information from the informal assessment with the results of standardized testing, a more complete linguistic profile will be the final product.

1) Language Sampling: A key component of the informal assessment is the collection of a language sample. A language sample must be collected that is long enough to determine whether the student is able to generate language of sufficient specificity and complexity to convey the ideas he or she is attempting to express.

The language sample should be analyzed to determine if it corroborates the results of the formal assessments administered. This analysis relies upon the use of normative data in the areas of phonology, morphology, syntax, semantics and pragmatics to make the comparisons. (Refer to Appendix K for suggested procedures for sampling and analysis)

2) Classroom Observation: Only in the actual classroom setting can a Teacher of the Speech and Language Impaired view how well the student is able to function and communicate in the academic climate. The observation should assess how well the student is able to follow classroom routine, interact with his/her teachers and peers, respond to and participate in classroom discussion, and utilize specific learning strategies. This information may help to support a teacher's description of the student and further elaborate test information. See Appendix H for a sample classroom observation checklist.

Procedures

1. Collect a spontaneous language sample. **It is suggested that the sample be done prior to administration of standardized tests in order to assist in the selection of appropriate diagnostic instruments.**

2. Administer no fewer than two language tests or subtests designed to assess the areas of language being considered. (See Appendix J for lists of tests and Appendix L for Pragmatic Assessment.)

    - Use broad-based language tests for identification of language impairment.
    - Use specific diagnostic tests and informal procedures to gather in-depth information about patterns of disability or to plan intervention.

3. Collect information from Teachers and Parents.

4. If needed, assess hearing sensitivity and auditory discrimination.

5. When possible, do a classroom observation.

Interpretation

1. Plot test results on the Profile of Test Results. (See Appendix E)

2. The combined assessment data should be analyzed to detect patterns of communicative strengths and deficits among test scores, language samples, and classroom behavior. Corroborative comparisons of results and observations should be sought.

3. Interpretations of test performance may be done by comparing results to normative data. Methods of interpretation include:

    * Standard scores which represent variations from the mean or average for a group in terms of standard deviations.
    * Percentile rankings which compare the test scores of a subject to the subjects in the norming sample by indicating the percentage of subjects who performed above or below the subject's score.

4. Observed language performance should be compared with expected performance to determine if a discrepancy exists.

Refer to the chart of the normal distribution curve as well as the guide to plotting and comparing scores.

Language Rating Scale Instructions

The model is based on a comparison of the student's **own** level of language functioning with the **expected** level of language functioning for others of comparable cognitive ability.

1. On the rating scale, circle the appropriate scores for each of three categories: formal assessment, informal assessment/language sample and adverse effect on educational performance. Circle the number in the box which represents the most extreme deficit.

2. To determine the rating for the formal assessment section, plot the language test results (expressed as stanines, standard scores, percentiles, etc.) on either the normal distribution curve (Appendix C) or on the profile of test results (Appendix E).

   Next plot the results of a standardized measure of cognitive ability such as WISC-R, WPPSI, Otis-Lennon, etc. When an IQ score is not available, refer to page, "Determining Cognitive Developmental Level". When available cognitive tests give verbal and performance scores, select the highest IQ score, either Verbal, Performance or Full Scale.

   Draw four vertical lines on the form: The first line at the student's cognitive ability level. The second line one and 1/3 standard deviations below the student's cognitive ability level. The third line one and 2/3 standard deviations below the cognitive ability level. The fourth line two standard deviations below the cognitive ability level. Determine the area in which the majority of the test scores appear. Circle the rating which corresponds to the pattern of test scores and check the impaired area(s).

3. Determination of the rating for the informal assessment depends heavily on professional judgement and reference to normative data. Factors to consider include the results of the mandated language sample, teacher made tests, observations etc. To score informal assessment, circle the number in the appropriate box and check the area(s) of impairment.

4. To assess the adverse effect on educational performance, utilize the Language: Teacher Input form.

5. Add the three scores and circle the total score on the rating scale. Add relevant comments that may include statements regarding discrepancies among individual tests, subtests, and/or classroom performance.

Considerations:

For the younger preschool child, the use of standard deviations often does not accurately reflect a discrepancy. It may be more appropriate to identify a discrepancy using tests that yield results expressed in age equivalency. (See Appendix O, "Preschool Communication Evaluation".) Consider using the rating scale: Language for the Cognitively Impaired which utilizes a comparison of language with cognitive ability. Also, for the preschool child, parent input would be needed to assess the adverse effect on educational (developmental) performance.

Please Note: For bilingual students evaluation should be conducted in their native language. If they display a language problem in their native language, as well as English, then the student is eligible for speech/language service. See page 54 "Special considerations for Bilingual or Limited English Proficient Children" and Appendix P.

Scoring Teacher Input

The Teacher of Speech and Language Impaired gives the form to the teacher to complete. It is scored by converting the number of "no" answers with the teacher input sheet into the following:

Interpretation of scores:

0 - 4	Non-handicapping condition.
5 - 10	Mild impact on the student's performance in the educational setting.
11 - 19	Moderate impact on the student's performance in the educational setting.
20 - 22	Serious impact on the student's performance in the educational setting.

This form serves as the classroom teacher's report to the MET and is used to assist in the final determination of severity of the adverse effect on educational performance.

Criteria

The total scores on the Language Rating Scale must fall at least within the MILD range and the score for adverse effect on educational performance must be at least a "4" to support a recommendation of eligibility as language impaired.

Student:_____ Date:_____
School:_____ TSLI:_____

LANGUAGE RATING SCALE

	Rating Scales			
	Non-handicapping Condition	Mild	Moderate	Severe
Formal Assessment	0 ___Scores less than 1 1/3 standard deviations below expected language performance. ___Form/structure ___Content/semantics ___Use/pragmatics	2 ___Scores are ≥ 1 1/3 and < 1 2/3 standard deviations below expected language performance. ___Form/structure ___Content/semantics ___Use/pragmatics	3 ___Scores are ≥ 1 2/3 and <2.0 standard deviations below expected language performance. ___Form/structure ___Content/semantics ___Use/pragmatics	4 ___Scores at 2.0 or more standard deviations below expected performance. ___Form/structure ___Content/semantics ___Use/pragmatics
Informal Assessment/ Language Sample	0 Language skills within expected range. ___Form/structure ___Content/semantics ___Use/pragmatics	2 Language skills mildly impaired. ___Form/structure ___Content/semantics ___Use/pragmatics	3 Language skills moderately impaired. ___Form/structure ___Content/semantics ___Use/pragmatics	4 Language skills severely impaired ___Form/structure ___Content/semantics ___Use/pragmatics
Adverse Effect on Educational Performance. Social Emotional Academic Vocational	0 ___No interference with child's participation in educational setting.	4 ___Minimal impact on the child's participation in educational setting.	6 ___Does interfere with child's participation in educational setting.	8 ___Seriously limits child's participation in educational setting.
Total Score	0 2 3 4 5 6	7 8 9	10 11 12 13	14 15 16
Rating Scales	Non-handicapping Condition	Mild	Moderate	Severe

COMMENTS:_____

KEY: ≤ LESS THAN OR EQUAL TO ≥ GREATER THAN OR EQUAL TO < LESS THAN

Teacher Input: Language

Student:_____ Date:_____

Teacher:_____ Grade/Program:_____

Please complete all of the following questions and return to the teacher of the Speech and Language Impaired:

		Yes	No
1.	Does the student speak in complete sentences?	____	____
2.	Is the student's grammar (syntax) adequate for his/her age?	____	____
3.	Does the student express himself effectively (organized, sequential thoughts)?	____	____
4.	Does the student contribute appropriately to class discussions?	____	____
5.	Is the student's vocabulary appropriate for his/her age?	____	____
6.	Is the student able to listen to a story and interpret the meaning?	____	____
7.	Is the student usually able to follow your oral directions?	____	____
8.	Does the student remember names, dates, times, places?	____	____
9.	Is the student's reading comprehension appropriate?	____	____
10.	Does the student comprehend math/science/social studies concepts?	____	____
11.	Does the student comprehend questions?	____	____
12.	Is the student able to problem solve?	____	____
13.	Is the student able to sequence pictures?	____	____
14.	Is the student able to recall names of known items?	____	____
15.	Is the student able to understand adult language (proverbs, idioms, humor)?	____	____
16.	Is the student able to use language relevant to the situation?	____	____
17.	Is the student able to establish and maintain eye contact?	____	____
18.	Is the student able to initiate and maintain appropriate conversation?	____	____
19.	Does the student use a speech system rather than a gesture system?	____	____
20.	Does the student use speech rather than relying on others to communicate for him?	____	____
21.	Is the student able to cope with distracting noises?	____	____
22.	Is the student able to follow directions without repetitions?	____	____

It is my opinion that these behaviors

____ Do not interfere with the child's participation in the educational setting.

____ Do interfere with the child's participation in the educational setting.

_____ Date

_____ Classroom Teacher's Signature

LANGUAGE: COGNITIVELY IMPAIRED

Language - Cognitive Impairments

It is necessary to document a need for speech and language services for students who have developmental disabilities. Current approaches to educational programming for persons having developmental disabilities emphasize the acquisition of functional skills that enable students to participate as fully as possible in all life domains. Communication intervention targets the communication skills needed to interact and participate in home, school, community, vocational and adult living environments. Documenting the need for speech and language services involves assessing the student's current communication skills and determining whether those skills enable the student to participate maximally in his life experiences. If the assessment reveals a mismatch between the skills the student possesses and the skills he or she needs, communication intervention is provided.

The reader is referred to writings by Neel and Billingsley (1989) for an example of a functional curriculum that embodies this type of communication assessment.

In addition to employing a functional framework to determine the need for services, some programs and practitioners attempt to demonstrate that a discrepancy exists between the student's current developmental level of communication performance and expected performance as predicted by his or her measured cognitive abilities. The rationale for attempting to determine a discrepancy derives from the assumption that the development of language and communication skills is unlikely to exceed or surpass the limit of one's intellectual ability. Given the validity of this assumption, intervention would not be likely to result in improvement if the student's communication and language skills are commensurate with his cognitive ability.

Of these two approaches to determining the need for communication intervention services, the first, "functional" approach is becoming more widely accepted and employed in programs for persons with developmental disabilities.

For practitioners and programs following a developmental approach for determining the need for speech and language services, the Language Rating Scale for the Cognitively Impaired may be used. This scale has been found to be useful for students in the Trainable Mentally Impaired category, and for some students classified Severely Mentally Impaired.

With more severely impaired students, particularly those who have not acquired language or have very limited expressive output, it is difficult to obtain valid standard scores on language measures. A traditional "language" sample cannot be elicited. For these more severely impaired students, two assessment options are offered. One is to use the Language Rating Scale for the Cognitively Impaired, employing the summary sheet from "The Michigan Decision Making Strategy" in Appendix V. The second is to use the procedures suggested in "A Service Delivery Model for SMI/SXI Students." This document comprises Appendix U. It can be used to determine the

need for service and service delivery options referenced to the student's level of communication development and needs.

Other Speech Problems

Students with cognitive impairments may display disorders of articulation, voice or fluency as well as language impairment. In this case, refer to the appropriate rating scale for the articulation, voice and/or fluency problem. The articulation rating scale compares developmental age with sound maturational norms.

Considerations for Traumatic Brain Injury (TBI)

Each TBI student is unique due to pre-injury cognitive ability, personality, learning style, the extent of damage and the time elapsed since the trauma. TBI generates a broad spectrum of neuropsychological and communicative deficits ranging from mild to profound. Communication is frequently impaired in the areas of attention, memory, orientation, knowledge of general information, abstract reasoning, problem solving, sequencing, organization and pragmatic language skills. TBI students often appear confused and behave inappropriately. Typically, these students have diffuse rather than focal damage. Many areas of the brain are damaged in varying degrees with some areas unaffected.

It will probably not be possible to use either the Language Rating Scale or the Cognitively Impaired Rating Scale exactly as written to determine eligibility of TBI students to receive speech/language services. The discrepancy between expected achievement and present performance may not be documentable using standard deviations. MET team consensus may be the determinant of the mild, moderate or severe rating.

Eligibility for service should be documented with appropriate formal assessments, informal tests, observations of educational performance and professional judgment. This should be accomplished in conjunction with additional input from members of the MET.

As TBI students are recovering, it is expected that their cognitive abilities will improve. For this reason, it is necessary for frequent reassessment of both cognitive functioning and language abilities to update and revise intervention.

Often, the case manager for TBI students continues to be one of the hospital staff. However, the Teacher of the Speech and Language Impaired may assume a major role in developing a program for cognitive retraining, managing memory problems and compensatory strategies in addition to implementing standard language intervention strategies.

Instructions for Cognitively Impaired Language Rating Scale

The model is based on a comparison of the student's own level of language functioning with the expected level of language functioning for others of comparable cognitive ability.

1. On the rating scale, circle the appropriate scores for each of three categories: formal assessment, informal assessment and adverse effect on educational performance. Circle the number in the box which represents the most extreme deficit.

2. The formal assessment portion of the rating scale includes two sections: an alternative assessment for students who cannot begin with "a standardized assessment option". A standardized assessment section for students who can be given tests that yield a language developmental age participate in formal testing. Choose only one method.

   The alternative assessment option utilizes the Michigan Decision Making Strategy. Included in this document is a copy of a summary chart from the Michigan Decision Making Strategy, as well as a reference chart which will assist in completing the summary chart. Shade in areas on the summary chart to indicate a pass at that level. Fit the information into the Language Rating Scale in the row "Alternative Assessment Option". Circle the rating in the corresponding box.

   If the student can be given language tests that yield a language developmental age, plot the language test results on the Profile of Test Results for either the SMI or TMI. Next, plot the results of a standardized measure of cognitive ability, expressed as a mental age level. If needed, the student's IQ score can be converted to a cognitive age equivalency by using the following formula:

   $$\frac{CA \times IQ}{100} = \text{age equivalency in months} \div 12 = \text{age equivalency in years}$$

   Draw a vertical line to indicate the student's cognitive ability level in months/years. Next, use a horizontal line to represent the language test scores, expressed in months/years. Determine the area in which most test scores cluster, for example, less than 9 months difference between cognitive developmental level and language developmental level. Circle the rating on the scale that corresponds to the pattern of test scores and check the impaired area(s).

3. Test results may be plotted using the appropriate Profile of Test Results in Appendix E.

4. The determination of the rating for informal assessment depends heavily on professional judgement. Factors to consider include results obtained from teacher made tests and classroom observations. The Teacher of Speech and Language Impaired report form for students who are nonverbal/cognitively impaired can be used to summarize observations. This form is used when a language sample analysis is impossible to obtain, due to a student's limited verbal ability. To score

informal assessment, circle the number in the appropriate box and check area(s) of impairment.

5. To assess the adverse effect on educational performance, utilize the Teacher Input: Cognitively Impaired form. The Teacher of Speech and Language Impaired gives the form to the teacher to complete. This teacher input is used to assist in the final determination of severity of the adverse effect on educational performance.

6. Add the three scores and circle the total score on the rating scale. Comments may include statements regarding discrepancies among individual tests, subtests, and/or classroom performance.

INTERPRETATION OF SCORES ON TEACHER INPUT

Less than 1 = No interference with child's performance in educational setting.
1 = Minimal impact on the child's performance in educational setting.
2 = Interferes with child's performance in educational setting.
3 = Seriously limits child's performance in educational setting.

SCORING TEACHER INPUT

To score the teacher input form, total the score and divide by the number of statements that received a rating of 1, 2, or 3. Do NOT count any statements that received a rating of 0.

Student:_____ Date:_____
School:_____ TSLI:_____

LANGUAGE RATING SCALE FOR COGNITIVELY IMPAIRED

Rating Scales

Formal Assessment	Non-handicapping Condition	Mild	Moderate	Severe
Standardized Assessment **OR**	0 Scores less than 9 months below expected language performance. _____Form/structure _____Content/semantics _____Use/pragmatics	2 Scores between 9 months and 1.5 years below expected language performance. _____Form/structure _____Content/semantics _____Use/pragmatics	3 Scores between 1.5 - 2.0 years below expected language performance. _____Form/structure _____Content/semantics _____Use/pragmatics	4 Scores 2.0 or more years below expected performance. _____Form/structure _____Content/semantics _____Use/pragmatics
Alternative Assessment Option For cognitively impaired students and/or those unable to be formally tested, use the Michigan Decision Making Strategy. Shade in boxes on Summary Chart. 80% of the shaded items in the box equals a pass at that level.	0 Preintentional Stage (0-8 months) or Representational thought or above with equal language and social skills.	2 Intentional Level Thought (8-18 months) and Reception and expression less than cognitive. and Social interaction less than language.	3 Representational Thought or above (18-24 months) and Expressive or receptive less than cognitive. and Social interaction equal to language.	4 Preoperational level of cognition typically allows for formal test. Use formal assessment procedure.
Informal Assessment/ Language Sample	0 Language skills within expected range. _____Form/structure _____Content/semantics _____Use/pragmatics	2 Language skills mildly impaired. _____Form/structure _____Content/semantics _____Use/pragmatics	3 Language skills moderately impaired. _____Form/structure _____Content/semantic _____Use/pragmatic	4 Language skills severely impaired. _____Form/structure _____Content/semantics _____Use/pragmatics
Adverse Effect on Educational Performance: Social Emotional Academic Vocational	0 ___ No interference with child's participation in educational setting.	4 ___ Minimal impact on the child's participation in educational setting.	6 ___ Does interfere with child's participation in educational setting.	8 ___ Seriously limits child's participation in educational setting.
Total Score	0 2 3 4 5 6	7 8 9	10 11 12 13	14 15 16
Rating Scales	Non handicapping Condition	Mild	Moderate	Severe

COMMENTS: _____

Teacher Input: Cognitively Impaired

Student:_____ Date of Birth:_____

Teacher:_____ Date:_____

Teacher Instructions:
Observe the student in your class and compare him/her to his/her cognitive peers. Please answer the following questions using the rating scale listed below.

NOTE: It is important to consider the student's cognitive developmental level when rating performance. For example, a student functioning at a 6 month cognitive level would not be able to formulate expressive language and participate in conversation. Therefore this student would receive a score of NA as the item is not appropriate to this student's developmental level.

Key: 3 = almost never occurs
2 = seldom occurs
1 = inconsistently occurs
0 = frequently occurs
NA = not applicable

NON-VERBAL COMMUNICATION

____Responds to adult attention.
____Expresses discomfort.
____Uses eye gaze and/or smiles to initiate and maintain interaction.
____Attends/responds to adult speaker.
____Attends to objects/events involved in an interaction.
____Comprehends communicative gestures such as pointing.
____Uses a specific action to communicate needs.
____Participates in simple turn-taking activities.
____Uses adult or environmental object as tool to obtain desired item or event.

VERBAL COMMUNICATION

____Imitates vocalizations.
____Uses a single word to communicate a complete message.
____Uses language for a variety of purposes. (e.g. naming, requesting, rejection, greeting, answering, possession, location)
____Participates in conversational situations.
____Gives appropriate responses to questions.
____Gives appropriate responses to questions, commands or directions.
____Recalls information given verbally. (auditory processing and memory)
____Recalls sequential information given verbally. (auditory sequential memory)
____Uses appropriate sentence structure.
____Generates meaningful communication.

GENERAL OBSERVATIONS

____Communicates in class.
____Communicates without frustration.
____Communication is easily understood.
____Communicates within a reasonable amount of time.
____Communication is adequate for expressing basic needs, feelings or sharing information.
____Communication is sufficient for pre-vocational training.
____Communication is sufficient for competitive employment.

It is my opinion that these behaviors: ____ Do not interfere with the child's participation in the educational setting.

____ Do interfere with the child's participation in the educational setting.

_____ _____
Date Classroom Teacher's Signature

FLUENCY

Rule 340.1710 of the Michigan Special Education code provides the following definition of a fluency impairment:

> (c) Fluency impairment, including abnormal rate of speaking, speech interruptions, repetitions of sounds, words, phrases or sentences, which interferes with effective communication.

Working Definition

It is commonly believed that a fluency impairment exists when abnormal rate of speaking, speech interruptions, repetitions of sounds, words, phrases, or sentences interfere with effective communication and may be accompanied by verbal or non-verbal speech modifiers (secondary symptoms).

A fluency impairment does not exist when dysfluencies:

1. **Are part of normal speech development.**
2. **Do not interfere with educational performance.**

ASSESSMENT CONSIDERATIONS

A fluency evaluation should include observations of speech in various communicative situations. Communication stress factors should be varied. The evaluation should consider a student's level of language functioning and environmental and health factors which may contribute to the fluency problem.

PROCEDURES

1. Collect samples of communication behavior in structured and unstructured communication conditions. See Appendices K and M for suggested procedures.
2. Examine oral/motor structure and functioning.
3. Collect information from Teacher/Parent Observation Checklists.
4. Interview student to determine self-perception of communication abilities.
5. If needed, assess hearing sensitivity.
6. It is recommended that a broad based language screening test be administered to explore the possibility of a concomitant language impairment.

Fluency Rating Scale Instructions

1. Complete Part A of the Fluency Rating Scale using one of two options:

   Option 1 - Use the Riley Stuttering Severity Instrument (Appendix M)
   Option 2 - Collect a spontaneous communication sample and analyze according to frequency of stuttering behavior and observations of speech flow and interruptions.

2. Complete Part B, Effect on Educational Performance, utilizing the Fluency: Teacher Input Form. The Teacher of the Speech and Language Impaired gives the form to the teacher to complete. To score the input form:

Scoring Teacher Input:

Add the number of "yes" responses and interpret the score as follows:

0 - 2 Yes	Non-handicapping condition
3 - 4 Yes	Mild
5 - 9 Yes	Moderate problem
10 - 13 Yes	Severe

This teacher input serves as the classroom teacher's report to the MET and is used to assist in the final determination of severity of the adverse effect on educational performance.

3. Add the scores on the rating scale and circle the total. Comments may include classroom performance and other pertinent observations.

Considerations:

For the preschool child, parent input would be used to assess the adverse effect on educational (developmental) performance.

Criteria

The total score must fall at least within the Mild range and score for adverse effect on educational performance must be at least "4" to support a recommendation of eligibility as fluency impaired.

Student:_____ Date:_____
School:_____ TSLI:_____

FLUENCY COMMUNICATION RATING SCALE

PART A	Non-handicapping Condition	Mild	Moderate	Severe
OPTION 1: Riley Stuttering Severity Instrument	0 % ile: 0-4*	4 % ile: 5-40*	6 % ile: 41-77*	8 % ile: 78-100*
OPTION 2: Informal Analysis a) Frequency – AND –	0 Frequency of dysfluent behavior is within normal limits for student's age, sex, and speaking situation and/or Less than 1 stuttered word per minute – AND –	2 Transitory dysfluencies are observed in specific speaking situation(s) and/or 1-3 stuttered words per minute – AND –	3 Frequent dysfluent behaviors are observed in many speaking situations and/or 4-10 stuttered words per minute – AND –	4 Habitual dysfluent behaviors are observed in a majority of speaking situations and/or more than 10 stuttered words per minute – AND –
b) Descriptive Assessment	0 Speech flow and time patterning are within normal limits. Developmental dysfluencies may be present.	2 Rate of speech interferes with intelligibility. Sound, syllable and/or word repetitions or prolongations are present with no other secondary symptoms. Fluent speech periods predominate.	3 Rate of speech interferes with intelligibility. Sound, syllable, and/or word repetitions or prolongations are present. Secondary symptoms including blocking, avoidance, and physical concomitants, may be observed.	4 Rate of speech interferes with intelligibility. Sound, syllable, and/or word repetitions and/or prolongations are present. Secondary symptoms predominate. Avoidance and frustration behaviors are observed.
Adverse Effect on Educational Performance: Social Emotional Academic Vocational	0 No interference with the child's participation in educational setting.	4 Minimal impact on educational participation. Minimal listener and/or speaker impact noted.	6 Interferes with educational participation. Minimal avoidance of selected speaking situations. Moderate listener and/or speaker reaction and concern noted.	8 Seriously limits educational participation. Avoidance of speaking situations is observed. Severe listener or speaker reaction and concern noted.
Total Score	0 2 4	8 9	10 11 12	14 15 16
Rating Scale	Non-Handicapping Condition	Mild	Moderate	Severe

COMMENTS:_____

*See "Percentile" column in Table I or Table II on the Stuttering Severity Instrument Test Form.

Teacher Input: Fluency

Student:_____ Date:_____

Teacher/Grade:_____ School:_____

Please fill out this form and return it to the teacher of the speech and language impaired. Your observation will help the therapist determine if this child's communication problem is affecting his/her educational performance. Thank you.

		Yes	No
1.	Does this student have a reduced verbal output?	[ ]	[ ]
2.	Does this student appear to avoid talking in class?	[ ]	[ ]
3.	Do you feel this student is delayed in language skills?	[ ]	[ ]
4.	Does this student use significantly more one-word responses (ex. twice as many) than the other students in your class?	[ ]	[ ]
5.	Does this student appear to dislike reading out loud?	[ ]	[ ]
6.	Does this student correct or revise his/her spoken errors less often than the other students in your class revise their spoken errors?	[ ]	[ ]
7.	Do you think this student knows he/she is having problems when he speaks?	[ ]	[ ]
8.	Has this student ever talked to you about his/her speech problem?	[ ]	[ ]
9.	Have either of the student's parents talked to you about his/her fluency problems?	[ ]	[ ]
10.	Do classmates make fun of this student because of his/her fluency problems?	[ ]	[ ]
11.	Have you heard anyone call him/her a stutterer?	[ ]	[ ]
12.	Does this student's speech problem make it difficult to understand the content of his/her speech?	[ ]	[ ]
13.	Does this student's fluency problem distract you sometimes from what he/she is saying?	[ ]	[ ]

It is my opinion that these behaviors: ____ Do not interfere with the child's participation in the educational setting.

____ Do interfere with the child's participation in the educational setting.

_____ _____

Date Classroom Teacher's Signature

VOICE

Rule 340.1710 of the Michigan Special Education code provides the following definition of an impairment of voice:

(b) Voice impairment, including inappropriate pitch, loudness, or voice quality.

Working Definition

It is commonly believed that a voice impairment exists when vocal characteristics of pitch, intensity, quality, or resonance interfere with communication, draw unfavorable attention, adversely affect the speaker or listener, and/or are inappropriate to the age of the individual. These impairments may be organic or functional in nature.

A voice impairment does not exist when vocal characteristics:

1. **Are the result of temporary physical factors such as: allergies, colds, abnormal tonsils or adenoids, short term vocal abuse or misuse.**
2. **Are the result of regional, dialectic or cultural differences.**
3. **Do not interfere with educational performance.**

ASSESSMENT CONSIDERATIONS

A voice evaluation should include observations of the student's voice in a variety of communicative situations. Consideration must be given to age, sex and cultural differences of the pupil. The evaluation should consider environmental and health factors which may contribute to the voice problem. The clinician should utilize current medical information if available.

PROCEDURES

1. Collect a sample of connected speech. See Appendix N for Voice Assessments and Appendix K for suggested language sampling procedures.
2. Examine oral/motor structures and functioning.
3. Collect information from Teacher/Parent Input.
4. If needed, assess hearing sensitivity and auditory discrimination.
5. Secure a laryngeal examination if possible.

Voice Rating Scale Instructions

1. Determine the rating for pitch, intensity, quality and resonance by circling the appropriate score in the box that best describes the student's voice. When a student has only one area of concern such as intensity, all of the other categories are scored zero.

Scoring Teacher Input

2. To assess the adverse effect on educational performance, utilize the Teacher Input: Voice form. The Teacher of the Speech and Language Impaired gives the form to the teacher to complete. To score the teacher input, total the number of points for each "yes" answer and interpret the score as follows:

0	- 7	yes points -	non-handicapping condition
8	- 12	yes points -	mild
13	- 15	yes points -	moderate
16	- 21	yes points -	severe

This teacher input serves as the classroom teacher's report to the MET and is used to assist in the final determination of severity of the adverse effect on educational performance.

3. Add the scores on the rating scale and write the total. Add comments when appropriate.

Considerations:

For the preschool child, parent input would be used to assess the adverse effect on educational (developmental) performance.

Criteria

The total score in the Voice Rating Scale should fall at least in the MILD range and the rating for adverse educational effect must be at least "2" to support a recommendation of eligibility as voice impaired.

Student:_____ Age:_____
School:_____ TSLI:_____

VOICE RATING SCALE

	Non-handicapping Condition	Mild	Moderate Descriptive	Severe Wilson Voice Profile Scale
Pitch	0 Pitch is within normal limits.	1 There is a noticeable difference in pitch which may be intermittent.	2 There is a persistent, noticeable inappropriate raising or lowering of pitch for age and sex or evidence of dysphonia.	3 +3 pitch -3 pitch -2 pitch
Intensity	0 Intensity is within normal limits.	1 There is a noticeable difference in intensity which may be intermittent.	2 There is a persistent, noticeable inappropriate increase or decrease in the intensity of speech or the presence of aphonia.	3 -3 laryngeal +2 intensity -2 intensity
Quality	0 Quality is within normal limits.	1 There is a noticeable difference in quality which may be intermittent.	2 There is a persistent, noticeable breathiness, glottal fry, harshness, hoarseness, tenseness, strident or other abnormal vocal quality.	3 -2 breathy +2 tension +3 laryngeal +2 laryngeal -3 laryngeal
Resonance	0 Nasality is within normal limits.	1 There is a noticeable difference in nasality which may be intermittent.	2 There is a persistent, noticeable cul de sac, hyper or hyponasality, or mixed nasality.	3 -2 resonance +3 resonance
Adverse Effect On Educational Performance: Social Emotional Academic Vocational	0 No interference with the child's participation in educational setting.	2 Minimal impact on the child's participation in educational setting	3 Does interfere with child's participation in educational setting.	4 Seriously limits child's participation in educational setting.
Descriptions Of Current Physical Condition (No Rating Points)	*No consistent laryngeal pathology; Physical factors influencing quality, resonance or pitch if present at all, are temporary and may include allergies, colds, abnormal tonsils and adenoids, short-term abuse or misuse.*	*Laryngeal pathology may be present; medical evaluation may be indicated. Physical factors may include: nodules, polyps, ulcers, edema, partial paralysis of vocal folds, palatal insufficiency, enlarged/ insufficient tonsils and/or adenoids, neuromotor involvement or hearing.*	*Probable presence of laryngeal pathology; medical evaluation usually indicated. Physical factors indicated in moderate and/or severe levels may be present.*	*Physical factors may include:* *-unilateral or bilateral paralysis of vocal folds.* *-laryngectomy* *-psychosomatic disorders* *-neuromotor involvement of larynx muscles i.e.cerebral palsy, medical evaluation generally indicated.*
TOTAL SCORE	0 1 2 3 4	5 6 7 8	9 10 11 12	13 14 15 16
RATING SCALE	Non-handicapping Condition	Mild	Moderate	Severe

COMMENT:_____

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Student: _____ Date: _____

Teacher/Grade: _____ School: _____

Please fill out this form and return it to the teacher of the speech and language impaired. Your observations will help the therapist determine if this child's communication problem is affecting his/her educational performance. Thank you.

			Yes	No
1.	Is this student able to project loudly enough to be adequately heard in your classroom during recitations?	(0)	[ ]	[ ]
2.	Does this student avoid reading out loud in class?	(1)	[ ]	[ ]
3.	Does this student appear generally to avoid talking in your classroom?	(1)	[ ]	[ ]
4.	Does this student ever lose his/her voice by the end of the school day? If so when? _____	(2)	[ ]	[ ]
5.	Does this student use an unusually loud voice or shout a great deal in your classroom?	(1)	[ ]	[ ]
6.	Does this student engage in an excessive amount of throat clearing or coughing? If so, which? _____ If so, does it appear to disturb the other students, (ex. their concentration, listening?) _____	(2)	[ ]	[ ]
7.	Is this student's voice quality worse during any particular time of the day? If so, when? _____	(1)	[ ]	[ ]
8.	Does this student's voice quality make it difficult to understand the content of his/her speech?	(4)	[ ]	[ ]
9.	Does this student's voice quality in itself distract you from what he/she is saying?	(3)	[ ]	[ ]
10.	Has this student ever mentioned to you that he/she thinks he/she has a voice problem?	(2)	[ ]	[ ]
11.	Have this student's parents ever talked to you about this student's voice?	(1)	[ ]	[ ]
12.	Have you ever heard any of his/her peers mention that his/her voice sounds funny or actually make fun of this student because of his/her voice problem?	(2)	[ ]	[ ]
13.	If this student has a pitch too low or too high does his/her pitch make it difficult to identify him/her as male/female just by listening?	(5)	[ ]	[ ]
14.	During speaking, does this student's voice break up or down in pitch to the extent that he/she appears to be embarrassed by this?	(4)	[ ]	[ ]

It is my opinion that these behaviors: ____ Do not interfere with the child's participation in the educational setting.

____ Do interfere with the child's participation in the educational setting.

_____ Date

_____ Classroom Teacher's Signature

SPECIAL CONSIDERATIONS

Special Considerations For 0-5 Year Olds

Speech/language eligibility for the 0-5 year old warrants special considerations. Learning to communicate during the first five years of life is crucial. The severity of identified problems becomes magnified since 90% of speech/language skills are developed by age five. Therefore, communication delays/disorders are more severe and limiting during this intense growth period than at later chronological ages. Deviances from normal developmental emergence may signify a more severe consequence to the formation of intact, mature communication.

ASSESSMENT CONSIDERATIONS

When evaluating the communication skills of a pre-school child, non-verbal as well as verbal behaviors which convey a message to the listener must be considered. The assessment should provide descriptive data on a child's abilities and inabilities obtained from norm-referenced data, developmental inventories and parent and/or teacher rating scales which supplement formalized tests. Language age scores can be misleading when compared to chronological age. They may suggest a simple delay when in fact, these delayed scores may reflect differences or deviances in the acquisition of communication skills. Data should also be gathered by observations and interactions which are child-initiated to observe how the child interprets events. Such contexts include:

1. parent/child interactions
2. child/child interactions including siblings and/or peers
3. teacher/child interactions
4. familiar routines
5. new situations

PROCEDURES

1. Obtain a case history from the parent/caregiver.
2. Observe the child with parents/caregivers/siblings/teachers.
3. Probe for specific behavior patterns by structuring the assessment environment.
4. Obtain a communication sample to include gestural, vocal, and verbal attempts.
5. Use formalized assessments. See Appendices O as well as I, J, M, N
6. Examine oral-motor structures and functioning.
7. Assess hearing sensitivity.
8. Collect information from Teacher/Parent observation checklists. See Appendices G, H

INTERPRETATION

1. Comparison to norm-referenced checklists
2. Comparison to developmental inventories
3. Comparison to standardized test data
4. Evaluation of case history information; developmental, motor, health, cognitive. At risk factors for various handicapped populations must be considered.
5. Effect on educational performance. With the 0-5 year old, the adverse effect on the home and family dynamics is the primary factor in determining eligibility for services.

See Appendix T for further normative information.

CRITERIA

Due to the wide range of non-verbal and verbal communication deviancies in the 0-5 year old, a specific rating scale is not included. It is suggested that if the child exhibits a specific speech/language disorder, the appropriate rating scale can be used to determine eligibility. In cases where more than one disorder is evident, the severity would be increased. When tests do not give standard scores, developmental language age scores may be used. A ratio quotient may be obtained by using the following formula:

$$\frac{\text{Developmental Language Age}}{\text{Chronological Age}} \times 100$$

The resulting quotient may be treated as a standard score and applied to the communication rating scale. Chronological age, developmental age, case history information, observation data, test results, and effect on home dynamics all contribute to the determination of the severity of the problem and subsequent eligibility.

SPECIAL CONSIDERATIONS FOR BILINGUAL OR LIMITED ENGLISH PROFICIENT CHILDREN

A 1980 Official Interpretation from Special Education Services of the Michigan Department of Education made it clear that "Students from different ethnic or racial groups are not handicapped solely because their manner of communicating does not conform to the expectations of the standard English speaking community." The interpretation summary states "Students are eligible for services by a teacher of the speech and language impaired if determined to have a speech or language impairment within their native language, or in English, if such an impairment is present after having been taught to communicate in English by personnel other than special education. The impairment must adversely affect educational performance and must not be based solely on cultural differences."

More recently, the Special Education Services division published Program Suggestions for the Provision of Special Education Services to Limited English Proficient Students in Michigan Schools. This document emphasized the importance of Pre-Referral Consultation when there is a school concern about a Limited English Proficient student. Through the Pre-Referral Consultation process, data regarding educational history and linguistic and cultural background and status may be compiled to rule out second language acquisition problems as the primary reason for referral. In this process, the Teacher of the Speech and Language Impaired functions as a member of the team of personnel who explore the student's level of language proficiency both in English and his/her native language.

Mattes and Omark (1984) suggest the use of pragmatic criteria to help determine whether or not a Limited English Proficient student demonstrates a speech and language handicap in their primary language. Using pragmatic rather than structural criteria is considered desirable because Limited English Proficient students would be expected to make numerous errors on the surface forms of English. These errors may result in the inaccurate conclusion that there is a language disability. Pragmatic criteria have been found to be more effective in identifying Limited English Speaking children with handicaps.

Mattes and Omark's Bilingual Oral Language Development (BOLD) inventory included in Appendix P may be used in the determination of pragmatic proficiency in the primary language. This pragmatic checklist identifies the functions of communication the student can perform in his/her first and second languages. This checklist may be completed through observation of the student in the educational environment and through interviews with the parents and other personnel who interact with the student. Observations and interviews should be a team endeavor, shared by trained bilingual staff, ESL staff, other school personnel and the Teacher of the Speech and Language Impaired. Referral for special education evaluation would be appropriate only for those limited English children who demonstrate problems in the use of their dominant language.

The identification of handicaps in students from other cultural and linguistic backgrounds is an extremely complex process which must be a shared responsibility. The Teacher of the Speech and Language Impaired should always function as a part of a Child Study team, or, in the case of a special education referral, as part of a truly interdisciplinary evaluation team, in considering the potentially handicapped status of a student.

For the reader who is interested in additional information about the Pre-Referral Consultation process for limited English proficient students, please refer to the Michigan Department of Education document, Program Suggestions for the Provision of Special Education Services to Limited English Proficient Students in Michigan Schools. An excellent supplementary document is "Preventing Inappropriate Referrals of Language Minority Students to Special Education," by Shernaz Garcia and Alba Ortiz, from the national Clearinghouse for Bilingual Education, 11501 Georgia Avenue, Wheaton, Maryland, 20902.

SPEECH AND LANGUAGE ELIGIBILITY OF SPECIAL POPULATIONS

The 1982 Michigan Department of Education document, Program Suggestions for Speech & Language Services, provides clear direction regarding the provision of speech and language services to students whose primary disability is other than speech and language impaired. It is important to recognize that speech and language services may be provided to otherwise handicapped students who are not designated "Speech and Language Impaired" under Rule 340.1710 as either a primary or secondary handicapping condition. The discussion from the 1982 document is quoted below to provide clarification of this issue.

SPECIAL POPULATIONS "A handicapped person who has a severe speech and language impairment but whose primary disability is other than speech and language shall be eligible for speech and language services pursuant to Rule 340.1745(a)."

"Many students whose primary disability is other than speech and language impairment exhibit verbal behavior indicative of delayed or disordered speech and language. Speech and language services should be provided for such students when careful differential diagnosis indicates that they would benefit from such services. Examples of this principle would be:

1. Articulation and/or voice therapy for hearing impaired students when necessary to develop and/or maintain speaking skills;

2. Language therapy for hearing impaired students to improve those language skills which have not developed at the expected rate because of the hearing loss;

3. Language and/or speech therapy for learning disabled students whose aural/oral and language processing deficits are a significant part of their learning problems.

4. Language and/or speech therapy for emotionally impaired students whose communication problems extend beyond the behaviors expected to be directly related to the emotional impairment; or

5. Language and/or speech and/or augmentative communication therapy for autistic, physically, or mentally impaired students when speech and/or language performance is delayed or deviant relative to other cognitive and social areas of development."

"A comprehensive evaluation is particularly crucial for students with multiple impairments. For example, mentally impaired students may be language or speech delayed with respect to their chronological ages but not delayed with respect to their mental ages. They may, in reality, be expressing ideas and using language forms commensurate with their reduced cognitive development. It is particularly important to determine whether cognitive development is sufficient to support receptive and expressive language for severely mentally impaired students who are nonverbal."

Also cited in the 1982 document is the subpart of Rule 45 which pertains to the necessity for a speech and language evaluation which documents the need for services:

"Rule 340.1745. Specific requirements for instructional services for the speech and language impaired are as follows:

(a) The extent of instructional services provided by a teacher of the speech and language impaired for persons determined to be eligible for special education in R340.1703 to R340.1714 shall be based on the handicapped person's needs as determined by the individualized educational planning committee after reviewing a diagnostic report provided by a teacher of the speech and language impaired."

These excerpts from the 1982 Program Suggestions clearly address four questions pertaining to the identification of the need for speech and language services for students with other handicapping conditions:

1. Students with handicapping conditions other than speech and language impairment **may** receive speech and language services without also being identified as speech and language impaired under R 340.1710;

2. A speech and language evaluation which documents the need for speech and language services must be conducted by a Teacher of the Speech and Language Impaired;

3. Documentation of the need for speech and language services may include information that demonstrates a discrepancy between expected and actual communicative performance;

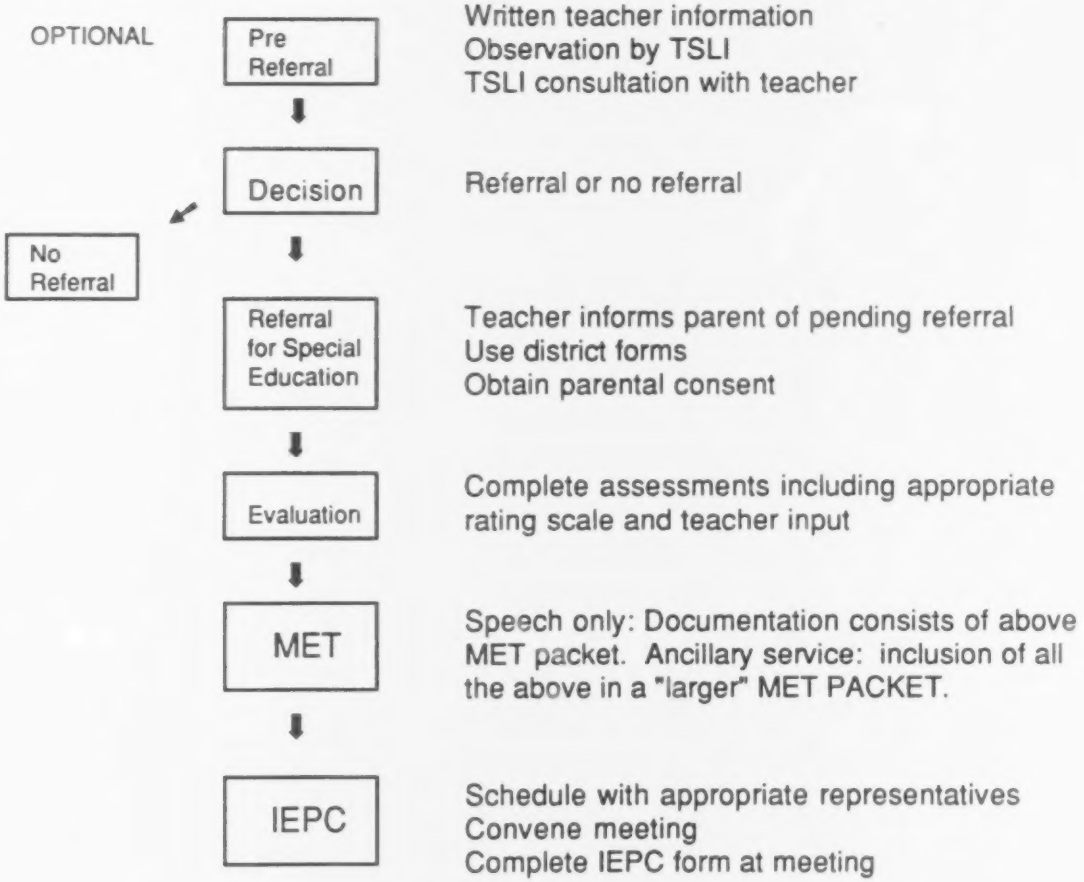
4. This documentation must be presented to and considered by the IEPC in making a recommendation for speech and language services for students with other handicapping conditions.

Multidisciplinary Evaluation Team Packet

This section outlines the MET procedure and has forms that may be used to record the results of the data collection process.

A complete speech and language MET packet will include the following:

- The MET summary sheet from the IEPC/MET Forms	1-2 pages
- The TSLI Speech & Language Evaluation Report consisting of a common first page, a second page specific to the disability and an optional third page	2 or 3 pages
- The appropriate Rating Scale specific to the disability	1 page
- The teacher input page which helps to document adverse educational effect AND serves as the second MET member's report	1 page
TOTAL	5 - 7 pages


OPTIONAL
Pre Referral
Written teacher information
Observation by TSLI
TSLI consultation with teacher
Decision
Referral or no referral
No Referral
Referral for Special Education
Teacher informs parent of pending referral
Use district forms
Obtain parental consent
Evaluation
Complete assessments including appropriate rating scale and teacher input
MET
Speech only: Documentation consists of above MET packet. Ancillary service: inclusion of all the above in a "larger" MET PACKET.
IEPC
Schedule with appropriate representatives
Convene meeting
Complete IEPC form at meeting

_____Initial
_____3 Year
_____Other_____

SPEECH AND LANGUAGE EVALUATION REPORT

Student #_____

Name:_____ B.D._____ C.A._____ School_____

Referral Date _____ Report Date _____ Grade_____ Evaluator(s) _____

SUMMARY OF EVALUATION DATA

*Communication Area Investigated (circle): See attached for detailed report.

Articulation Language Fluency Voice

***LIST OF EVALUATIONS**

Assessment (tests, etc.) Score/Rating Date

1. _____
2. _____
3. _____
4. _____

(Cognitive) _____

***APPLICABLE HEALTH HISTORY**

Hearing: (circle) Assumed Normal Evaluated Normal Date _____ Actual Loss L_____R_____ Evaluation Date _____

Related Medical/Physical/Developmental Problems:_____

_____

_____

EDUCATIONAL IMPLICATIONS

*1. Adverse effect on education performance. Yes_____ No_____
Classroom Teacher Input attached.

*2. Eligibility recommended as (circle)

Articulation Language Fluency Voice None

3. Observation of Communication Impairment in LRE (optional) Date _____
Specific problem(s) observed _____

_____

*4. Indicate specific problem(s) to be addressed by speech and language goals if eligible._____

_____

_____

*5. Amount and type of service to be recommended. Type_____

Length of session _____min/hours Frequency _____wk/mo.

*Must be completed

3/90

Name: _____ (Attach to Summary Page)

ARTICULATION/PHONOLOGY

DEFECTIVE PHONEMES Indicate as follows: O = Omit D = Distortion Enter Substitution

Consonants - Approximate developmental age cited. (Iowa: Smit 1986)

3.0 __/__/__m __/__/__p __/__/__h __/__/__w
3.5 __/__/__n __/__/__b __/__/__d __/__/__k
4.0 __/__/__g
4.5 __/__/__t
5.0 __/__/__y
5.5 __/__/__f __/__/__v __/__/__ch __/__/__TH (v)
7.0 __/__/__sh __/__/__j __/__/__zh
8.0 __/__/__r __/__/__l __/__/__th
9.0 __/__/__s __/__/__z __/__/__ng

Vowels ___ as in _____
___ as in _____
___ as in _____

Errors are
____ consistent
____ inconsistent

Phoneme errors persisting beyond the age at which maturation alone might be expected to correct the deviation.

_____ _____ _____ _____ _____ _____ _____

Processing errors: If any have persisted _____

_____

STIMULABILITY

Easily stimulated _____
Close approximation _____
Not stimulable _____

INTELLIGIBILITY

Estimated _____%
Actual _____%

ORAL MOTOR FUNCTIONING

_____ Within expectations
_____ Problems noted_____

SEVERITY RATING (circle)

non-handicapping mild moderate severe

Name: _____ (Attach to Summary Page)

LANGUAGE SAMPLE ANALYSIS

SPONTANEOUS SAMPLE

Mean length of utterance: _____ Number of utterances used to determine length _____

Predominant sentence type: Simple _____ Complex _____ Interrogatory _____

SYNTAX/MORPHOLOGY (Structure) Rate by using - ✔ = Problem O = Not observed

____ pronouns	____ prepositions	____ demonstratives
____ articles	____ plurals	____ locatives
____ conjunctions	____ possessives	____ contractions
____ verb tense	____ negation	____ questions
____ adjective	____ adverbs	____ comparatives
____ word order		

Errors are
___ consistent
___ inconsistent

SEMANTICS (Content)

1. Describe vocabulary used (e.g. "age appropriate" "only 25 words" etc.)

   _____

2. Problems noted:

____ Dysnomia	____ Space
____ Circumlocutions	____ Time
____ Fillers/stallers (i.e., um, a-a-a-, m-m)	____ Quantity
____ Non-specific words (i.e., frequent use of it)	____ Echolalia

____ Other. Describe _____

PRAGMATICS (Use) ✔ = Problem O = Not observed

1. ____ Situational use
   a. ____ Greetings
   b. ____ Eye contact
   c. ____ Requests
      ____ objects
      ____ actions
      ____ information
   d. ____ Denials
   e. ____ Stating information
2. ____ Initiates topics
3. ____ Maintains topic
4. ____ Turn taking
5. ____ Organizing and sequencing ideas
6. ____ Elaboration of ideas
7. ____ Variety of vocabulary
8. ____ Verbal perseveration
9. ____ Appropriateness of utterances to topic/situation

PARALINGUISTIC ASPECTS ✔ = Problem O = Not observed

1. ____ Prosody
2. ____ Intelligibility
3. ____ Fluency
4. ____ Vocal intensity
5. ____ Vocal quality
6. ____ Juncture
7. ____ Inflection

Summary of language sample analysis _____

_____

_____

TESTS THAT SUPPORT LANGUAGE SAMPLE ANALYSIS

_____

_____

SEVERITY RATING (Circle)

non-handicapping mild moderate severe

Name: _____ (Attach to Summary Page)

LANGUAGE : NONVERBAL/COGNITIVELY IMPAIRED

KEY:
+ = uses skill ✔ = emerging skill - = does not use skill O = cannot use skill

EARLY COGNITIVE-LINGUISTIC SKILLS
____ responds to sound
____ tracks objects/people
____ focuses on objects/people
____ recognizes cause/effect relationship
____ initiates vocalizations
____ imitates actions
____ demonstrates understanding of object permanence
____ knows function of familiar objects

RECEPTIVE LANGUAGE
____ responds to name
____ identifies nouns (objects)
____ follows one step direction
____ follows two step direction
____ identifies familiar people
____ identifies pictures
____ understands number concepts
____ identifies action verbs
____ identifies adjectives
____ identifies adverbs
____ identifies colors

EXPRESSIVE LANGUAGE
____ uses specific action/sound to get attention/make request
____ uses eye contact to initiate/maintain interaction
____ makes choices
____ indicates needs
____ uses yes/no response
____ uses nouns
____ uses action verbs
____ uses pronouns
____ uses prepositions
____ uses adjectives
____ uses adverbs

PRAGMATICS
____ makes requests-objects
____ makes requests-actions
____ makes requests-information
____ expressive denials
____ maintains topic
____ exhibits turn taking
____ organizes/sequences ideas
____ elaborates ideas
____ uses a variety of vocabulary
____ uses appropriate utterances

If student uses an augmentative communication system device, indicate type _____
Level of performance with augmentative communication system/device _____

Name: _____ (Attach to Summary Page)

FLUENCY - A minimum taped language sample of 5-10 minutes is recommended

STUTTERING BEHAVIOR

OPTION 1 (circle)
Riley Stuttering Severity Score

%tile 0-4 %tile 5-40 %tile 41-77 %tile 78-100

OPTION 2 (circle)
Stuttered Words Per Minute

Less than one 1-3 4-10 10 Plus

Descriptive Assessment

Developmental Dysfluencies Fluent Speech Predominates

Secondary Sysmptoms Observed Secondary Sumptoms Predominate

SECONDARY CHARACTERISTICS - Check occurrence

Verbal Behaviors
____ Prolongations
____ Repetitions
____ Whole word
____ Syllable
____ Single phoneme
____ Abnormal rate
____ Change in pitch
____ Glottal fry
____ Revisions
____ Interjections
____ Starters

Non-Verbal Behavior
____ Lack of eye contact
____ Tremors
____ Facial grimaces
____ Extraneous body movements
____ Breathing irregularities
____ Evidence of frustration

LANGUAGE - Is there a basic or associated language problem? _____

Indicated by _____

PHONOLOGICAL ANALYSIS as related to dysfluencies

_____

ORAL MOTOR FUNCTIONING _____

BACKGROUND INFORMATION Provided by _____ Age of onset _____

Parental expectations/concerns _____

_____

Student's expectations/concerns _____

_____

Situations which provoke/increase stuttering _____

_____

SEVERITY RATING (circle)

non-handicapping mild moderate severe

Name: _____ (Attach to Summary Page)

VOICE

VOCAL CHARACTERISTICS check if present and describe

Pitch

____ Habitual pitch too high including falsetto
____ Habitual pitch too low
____ Pitch break

Intensity

____ Inappropriate vocal intensity Specify _____

Quality

____ Aphonia
____ Phonation break
____ Breathiness
____ Abrupt initiations
____ Glottal Fry
____ Hoarseness
____ Harshness

Resonance Nasality/Denasality

____ Hypernasality (vowels)
____ Hyponasality
____ Nasal emission (consonants)
____ Assimilated nasality - nasality on vowels adjacent to /m/, /n/, /ng/
____ Mixed

CONTRIBUTING FACTORS

____ hearing
____ allergies
____ medication
____ surgery
____ temporary health problems
____ vocal abuse

Duration of symptom _____

Medical Information _____

_____

FURTHER OBSERVATIONS

____ coughing/throat clearing
____ marked neck muscle activity during phonation
____ marked upward or downward excursion of the larynx during phonation

Score on Wilson Voice Profile Scale (if used) _____

SEVERITY RATING (circle)

non-handicapping mild moderate severe

Name: _____ (Attach to Summary Page)

SPEECH AND LANGUAGE REPORT (optional page)

This page may be used as a supplement to the Teacher of Speech and Language report. Significant observations, test analysis, extension testing or other pertinent data may be recorded.

SERVICE DELIVERY MODEL

DELIVERY OF SPEECH AND LANGUAGE SERVICES IN THE PUBLIC SCHOOLS

During the past 20 years, several developments have occurred that have drastically influenced the delivery of speech-language services in public schools. They include a shift in the characteristics of students included in the category of Speech and Language Impaired, the passage of Public Law 94-142, an emphasis on collaborative teamwork in the educational process, and a reevaluation of intervention scheduling.

Speech and Language Impaired - Student Characteristics

There has been a tremendous growth of knowledge about language development and language disorders in children during the past three decades. This knowledge has resulted in a dramatic increase in the number of school children identified as having language impairments. Of the 5.5% of all school children who have communication impairments, as many as 70% manifest language impairments.

Along with the increased identification of language impairments in children has come the more recent realization that language disorders are persisting conditions, lasting through the school years and into adulthood, and that language disorders have pervasive and damaging effects on nearly all aspects of educational performance. These understandings have precipitated the development of different kinds of educational programs and support services for language impaired children. Classroom programs and resource room services for the language impaired have existed for many years in some states. However, in too many places, the clinically oriented, twice-a-week intermittent model has predominated. The adequacy of the clinical, intermittent model is currently being questioned, and alternative services for language impaired students are being suggested.

Public Law 94-142

In 1975, the United States Congress passed Public Law 94-142, the Education of the Handicapped Act. In this Act, educationally handicapping conditions are defined. One of the conditions necessary for any deviance or impairment to be called a handicap is an "adverse effect on educational performance."

A result of this emphasis on adverse effect on <u>educational performance</u> has been increased attention to the interaction between speech and language impairments and the educational context. This, in turn, has resulted in the recognition that educational handicaps do not exist only <u>within</u> students. Instead, the educational handicap exists in the <u>interaction</u> between a student's communication impairment and the learning conditions that exist in the student's educational setting.

The understanding that an interaction of factors defines a handicapping condition holds very powerful implications for the services provided by the Teacher of the Speech and Language Impaired. It implies that the focus of intervention must be two-pronged. In addition to interventions designed to strengthen students' basic communication skills, other interventions must address the educational setting and

instructional variables that suppress or enhance communicatively impaired students' learning. Adjustments of environmental characteristics and teaching strategies must be encouraged to help students compensate for problems related to communication performance and to ensure that students have optimal opportunities for learning and generalizing basic communication skills.

Concerns Regarding Pull-Out Programs

Another, more recent development that is influencing the delivery of special services (including speech-language services) is a criticism of over reliance on pull-out programs. Pull-out programs have come under scrutiny because they frequently lack coordination with classroom learning needs and goals, and result in fragmented instruction that may be irrelevant to students' actual educational needs. Also, going to pull-out programs means that children are not present for ongoing classroom instruction, resulting in their missing potentially important learning experiences. Another criticism of pull-out programs is the inherent implication that the specialist who provides the pull-out service is the only person qualified to provide and be responsible for a specific area of instruction. This is the most severe criticism because an outcome has been that students actually receive <u>less</u> instruction in areas of need because only one person is identified as an appropriate service provider. See articles by Miller, Nelson, Norris and Simon in the reference section of this document.

While the over reliance on pull out services has been criticized in the overall arena of special education, the use of pull out instruction must be recognized as a legitimate option for some speech and language impaired students at various points in the intervention process to address specific skill learning needs. However, for many students, especially those having language impairments, additional and alternative options must be available.

Least Restrictive Environment

Related to the criticism of pull-out services is the requirement of Public Law 94-142 that all handicapped students must be educated in the "Least Restrictive Environment". This means, to the greatest extent possible, they must receive education with non-handicapped peers. Separating, or segregating, all students with handicaps for special instruction is therefore incompatible with the Least Restrictive Environment provision of the law.

Replacing the separation of students for specialized instruction is a movement toward providing supportive instruction <u>within</u> students' learning environments (including classroom, home and community settings), and actively involving classroom teachers, parents and other service providers in the "special" instructional process. It is believed that this will result in instruction being more closely related to students' actual educational needs, as well as insuring that students will receive more opportunities for practice and generalization of learning.

Communication Learning Environments

Advances in the science of intervention have resulted in increased attention to environmental factors that influence communication learning. For example, research with cognitively impaired individuals has shown that new communication skills are most readily learned in the environments in which the skills are actually needed and frequently used. The interaction demands of specific environments serve as the stimulus for the employment of the skills, and successful participation in the interactions provides a natural and powerful reinforcer for skill learning.

This has led to an expansion of the sites of teaching communication skills, to include classroom, home, community and vocational settings. For example, the Teacher of Speech and Language Impaired might accompany a student to a job site, analyze the communication demands of the situation, and provide on the spot intervention to assist the student in participating in job related communication. Similarly, Teachers of the Speech and Language Impaired are providing intervention within students' classrooms, helping speech and language impaired students acquire the language and communication skills necessary to participate competently in classroom interactions. The assumption underlying these practices is that communication skills can be taught and learned in many settings, including carefully controlled clinical settings. The selection of intervention environments is determined by the nature of the skills to be acquired and by the learning characteristics of individual students.

Educational Collaboration

Recognition of the magnitude and pervasiveness of language impairments has led to the realization that the speech-language specialist cannot possibly be the only service provider; the assistance of other intervention providers must be sought and obtained. Thus, the intervention process has become a shared responsibility. Others who might participate in the communication intervention process include the student's parents or caregivers, the student's teachers, other ancillary service providers, vocational coordinators and any other educational personnel who regularly interact with the student.

Expected Outcomes

Reexamination of past expectations of speech-language services for some language impaired students has revealed that the goal of complete amelioration of the language learning problem is not realistic. While significant improvement of language performance can be expected from intervention, progress usually lags behind the increasingly challenging language demands of school. Intervention must therefore include supporting students in their educational programs by helping teachers provide instructional experiences that allow students to compensate for deficiencies while promoting the acquisition of the knowledge and skills of the curriculum. The ultimate goal of intervention is to help students learn strategies that will enable them to independently manage their impairment and control their learning.

Scheduling of Services

While many of the developments affecting speech-language services in the schools revolve around the needs of students with language impairments, services to students having other kinds of communication impairments are being reexamined. For example, the practice of providing twice-a-week services over a period of several years to students with articulation, voice, and fluency impairments has been questioned. Alternatives such as providing short-term intensive intervention followed by longer periods of generalization practice overseen by parents, classroom teachers or other school staff are being proposed. It is argued that this is more beneficial in providing more closely massed instruction on specific skills, and the generalization periods allow the students and other intervention providers to assume more responsibility for managing the problem.

All of these developments are resulting in profound changes in the manner that speech-language services are delivered in public schools. To help Teachers of the Speech and Language Impaired conceptualize new and more effective models of service, and employ a wider range of service options to meet individual student needs, the following descriptions of speech-language services are offered.

Selection of service options is based upon the needs of students represented on each caseload. It is recommended that the Teacher of the Speech and Language Impaired think in terms of the optimal combination of options that may be employed to meet individual student needs. The decision to implement the options from those described is the responsibility of the Teacher of the Speech and Language Impaired in consultation with school personnel and parents. To the greatest extent possible, the Teacher of the Speech and Language Impaired should function as a member of the total school building team addressing the needs of students in that building, in partnership with classroom teachers, other support personnel, and the building administrator. As a member of a building team, the Teacher of the Speech and Language Impaired is in an optimal position to redefine her/his role to develop maximally effective and successful and educationally relevant speech-language services.

SPEECH-LANGUAGE SERVICE OPTIONS

Services to speech and language impaired students can be conceptualized as having two major goals:

1. The first goal is to promote the development and improvement of students' basic communication skills.

2. The second goal is to provide support to the student in the educational environment to facilitate his or her successful participation and learning.

The second goal often involves recommending and implementing modifications of educational setting and instructional variables that suppress or enhance communicatively handicapped students' learning. Adjustments of environmental characteristics and teaching strategies are encouraged to help students to

compensate for problems of communication performance and to ensure that students have optimal opportunities for learning and generalizing basic communication skills.

To address goals in these two areas, speech-language service delivery models must be expanded to include both Direct and Indirect services to communicatively handicapped students.

Indirect Services are those professional activities that the Teacher of the Speech and Language Impaired undertakes on behalf of students with communication impairments. The primary goal of indirect services is to modify the educational circumstances that surround students so that they can perform more successfully in school. Ways of modifying educational circumstances include helping others (parents, teachers) become more knowledgeable about communication disorders and their effects on educational performance and helping others modify curriculum, teaching strategies, learning activities, and communication interaction patterns to enhance the educational performance of students with communication impairments.

Indirect services can achieve both of the major goals of speech-language services; improving students' basic communication skills, and supporting students' educational performance.

Direct Services are those instructional activities that the Teacher of the Speech and Language Impaired conducts with communicatively impaired students. These instructional activities are called by various names: therapy, intervention, coaching, remediation, teaching, instructing, etc. Regardless of the name, they all involve instructional contacts between the Teacher of the Speech and Language Impaired and students. Direct services may take place in any setting in which communication skills may be taught and learned. This includes separate "therapy rooms", students' general or special education classrooms, students' homes, job sites, or any other school or community settings. Direct services may be conducted with individual students or with groups of students. Direct services may be conducted by the Teacher of the Speech and Language Impaired alone or in collaboration with another instructor.

Direct services primarily address the improvement of students' basic communication skills. When direct service instruction is conducted in cooperation with other instructors, an additional benefit often accrues. The second instructor may repeat the direct instruction strategies in the absence of the Teacher of the Speech and Language Impaired, thus providing communicatively impaired students with additional and more frequently occurring instructional experiences that are designed to improve basic communication skills. Thus, collaborative direct services have the potential of becoming effective indirect services.

The following outline shows the speech-language service delivery options under Indirect and Direct Services.

I. ALLOWABLE (IEP) SERVICES TO ELIGIBLE HANDICAPPED STUDENTS

Indirect Service	Direct Service	Programs
1. Consultation	1. Initial Assessment	1. Severely Language Impaired Classroom
2. Monitored Instruction	2. Direct Instruction	2. Other Special Education Programs

II. OTHER SERVICES PROVIDED BY TEACHERS OF THE SPEECH & LANGUAGE IMPAIRED

Pre-Referral Consultation
Inservice
Curriculum Development
School Improvement Participation
Child Find/Kindergarten Roundup
Service Coordination (99-457 Part H)

Service Option Descriptions

Services to Eligible Speech and Language Impaired Students:

In most Michigan school districts, the primary responsibilities of Teachers of the Speech and Language Impaired involve the provision of services to eligible handicapped children. The following service options may be employed.

Indirect Service: Consultation

Consultation is a state-approved IEP option for eligible speech and language impaired students. Speech and language goals and objectives are developed cooperatively by the Teacher of the Speech and Language Impaired and the student's teacher. To address these objectives, consultation is provided by the Teacher of the Speech and Language Impaired to other educational staff who work with the eligible student. Consultative meetings are conducted on a regularly scheduled basis (as specified on the student's IEP) to address such issues as modifications of the educational environment, curriculum, classroom structure, classroom learning activities, and classroom communication patterns to facilitate the student's successful educational participation. Through modifications of these learning variables, the student's communication learning style and needs may be accommodated, and specific communication goals and objectives are addressed. Also, the opportunities for the student to practice emergent communication skills can be maximized. The consultation option may be either elected as the sole service option or it may be provided in combination with other options such as direct instruction. This option is stated on the student's IEP in the following manner: "Rule 340.1745 Speech and Language Services - Consultation" stating the length and frequency of consultative contacts with the student's teacher(s). Students who receive the consultation service are counted on the caseload of the Teacher of the Speech and Language Impaired providing the service.

Indirect Service: Monitored Instruction

This option is provided in combination with Direct Instruction. It is designed to permit staff in addition to the Teacher of the Speech and Language Impaired to provide instruction to improve speech and/or language skills. Specific goals and objectives for the student are developed by the IEPC, and a program of instruction designed to achieve those goals is developed by the Teacher of the Speech and Language Impaired. This program is carried out in part by other educational staff (e.g., paraprofessionals) or parents (on a voluntary basis), who provide instruction to the student on a regularly scheduled basis. This instruction supplements the intervention conducted by the Teacher of the Speech and Language Impaired who also sees the student for direct instruction at least 1-2 times a month.

This option differs from Consultation in that a specific program of intervention is recommended, and the Teacher of the Speech and Language Impaired assumes the responsibility of monitoring the implementation of the program as well as student progress under the program. The Teacher of the Speech and Language Impaired meets with the designated staff on a regularly scheduled basis to monitor the program, model new procedures, provide new materials, review progress and update instructional objectives. The Teacher of the Speech and Language Impaired always assumes the responsibility of teaching the student new speech and language skills. The monitored program provides the student with practice opportunities to develop automaticity of skill use.

This option may be stated on the IEP in the following manner: "Rule 340.1745 Speech and Language Services - Direct Instruction (indicating the length and frequency of contacts with the student), and Monitored Instruction (indicating the length and frequency of contacts with the person implementing the program.) Students who receive this combination of services are counted on the caseload of the Teacher of the Speech and Language Impaired who provides the service.

This service delivery option is not meant to be used in the absence of direct instructional services by a Teacher of the Speech and Language Impaired, and may not be used as a substitute for services provided by a certified Teacher of the Speech and Language Impaired.

Direct Service: Assessment

Assessment is the process of measuring a student's communication skills for the purposes of determining eligibility and evaluating progress. A comprehensive discussion of assessment is found at the beginning of this document. During the period of time that an initially referred student is receiving assessment to determine eligibility, that student is counted on the caseload of the Teacher of the Speech and Language Impaired who is conducting the assessment.

Direct Service: Direct Instruction

In this option, direct instruction addressing the improvement of speech and language skills is conducted by the Teacher of the Speech and Language Impaired. Instruction

may be provided to individual students alone or to students in small or large (even entire classroom) groupings. Instruction may be provided in any setting in which communication skills can be used and learned. This includes separate therapy or tutoring rooms, classrooms (both general and special education classrooms), students' homes, job sites, or any other school or community settings. The content of instruction will vary according to individual student's needs, and may include the development of specific, discrete communication skills; language content, form, and use; or instruction that is directly referenced to the language content and communication skills that students need to successfully participate in classroom learning experiences.

The frequency and length of the instructional contacts will vary according to the student's attending skills, the content of the instructional activities, the size and composition of the instructional groupings, and, above all, the student's instructional needs.

Direct instruction may be conducted by the Teacher of the Speech and Language Impaired alone or in collaboration with other instructional staff. Collaborative instruction practices are increasingly used to support special education students within general education classrooms. The Teacher of the Speech and Language Impaired may enter into collaborative instructional arrangements with classroom teachers to meet the communication instruction needs of speech and language impaired students.

Students may receive combinations of direct instructional services. For example, a student may receive direct instruction with his classmates within his general education classroom twice a week, small group instruction in a separate room once a week and individual instruction once every other week. The combination that is most effective in meeting the student's needs should be developed.

The scheduling of direct services can follow the intermittent regular pattern (e.g., 3 sessions a week for the school year), or alternating periods of "blocked" instruction (e.g., 4 sessions a week for 8 weeks, followed by a carry over period of one session every other week for 6 weeks, which is followed by another period of 4 sessions a week, etc.). The scheduling that is most effective in meeting the student's needs should be chosen. See page 76 for how to write this option on the student's IEP.

Secondary students needing speech and language services may be scheduled into a board-approved class for one period per day for which they receive a language arts credit. This option is useful for middle and high school students who find it penalizing to miss classes to attend intermittent speech-language therapy sessions. The language programming is developed by the Teacher of the Speech and Language Impaired with input from teachers and parents at the IEPC.

A successful alternative to the full time commitment to a daily Communication Skills class has been the establishment of collaboratively instructed English or Language Arts classes with secondary level special education teachers, particularly in departmentalized special education programs. The curriculum is jointly developed by the Teacher of the Speech and Language Impaired and the special education staff to meet the individual needs of students. This option may be stated on the IEP in the

following manner: "Rule 340.1745 Speech and Language Services" indicating the length of each contact and the frequency of contacts.

Program Option: Severely Language Impaired Classroom

While a Severely Language Impaired Classroom is not considered to be a service option since it constitutes a special education placement, it is a direct instruction option for preschool and elementary age students that should be part of the continuum of special education programs and services available for speech and language impaired students. In a Severely Language Impaired Classroom, direct instruction is provided in communication skill development and academic areas by a Teacher of the Speech and Language Impaired. Additional supplementary speech and language service may be provided, depending on classroom staffing patterns and students' needs.

This option may be stated on the IEP in the following manner: "R.56 Severely Language Impaired Classroom" indicating the number of hours spent per day in this classroom. If additional speech and language services are provided to students in Severely Language Impaired Classrooms, the IEP must state the service option employed under Rule 340.1745 indicating the frequency and duration of the contacts with the additional speech and language service providers.

Other Program Options

Other special education program and service options exist for students with speech and language impairments. For example, a categorical Learning Disabilities program which provides intensive instruction in language and communication may be an appropriate educational alternative for some students with language impairments. Special education programs that emphasize collaborative planning and instruction by Teachers of the Speech and Language Impaired and classroom staff also may effectively meet the needs of students having speech and language impairments. Also, Teacher Consultant services may assist students having speech and language impairments when there is strong collaborative planning among all ancillary service providers and classroom staff. Students having speech and language impairments may access any variety of combinations of special education programs and services deemed appropriate to meet their needs by the IEPC.

EXAMPLES

In the following section, examples of service option combinations to eligible handicapped students are presented. These examples are offered to illustrate how service options can be flexibly developed and combined to provide maximally effective intervention.

EXAMPLES OF SPEECH LANGUAGE SERVICES

EXAMPLE I

Jim is a 9 year old who has received speech-language services since he was four years of age for a severe multiple articulation impairment related to a motor planning

disorder. At 9 years of age, he continues to have difficulty producing the ch, j, l and r phonemes.

The Teacher of the Speech and Language Impaired has worked with Jim for the last three years. She has noted that he needs extensive direct instruction to learn the movement patterns for each phoneme. She begins with the movement sequence in isolation without voicing, moves to the phoneme in isolation, then to syllables, words and phrases. She has observed that once Jim locks into the movement pattern he can reproduce it accurately at all syllable, word, and phrase levels, but he needs a period of conscious generalization practice to really automatize his correct and consistent production pattern. She then moves on to another phoneme.

Jim is highly motivated to improve his speech. However, he is tired of going to speech therapy, having been in speech for five years.

The services this year, planned with Jim, his parents and teacher, will be block scheduled. He will receive 8 weeks of direct instruction, 4 times a week. This is the amount of time estimated to get him to the phrase level of target phoneme production. This will be followed by 10 weeks of carry over practice which his parents have agreed to monitor. Also, his teacher will monitor production during oral reading and classroom instruction. A subtle signal has been developed by Jim and his teacher to be a reminder to modify production. The Teacher of the Speech and Language Impaired will provide materials and activities for supervised practice at home. After the 10 weeks of generalization practice, another 8 week period of 4 times a week direct instruction will be provided. This will be followed by a 10 week carry over period. Halfway through each 10 week period, the Teacher of the Speech and Language Impaired will hold a conference with Jim's parents to review his progress and to suggest additional materials and activities.

Jim likes this plan because it will give him a "vacation" from speech class. His parents are in favor of the plan because they have been concerned about the instructional time he is missing in his classroom. They are very conscientious about following through at home. Jim's IEP would reflect this plan. "First semester direct instruction from September 10 to November 2, for 20 minutes/4 times a week. From November 3 to January 25, consultation 1 hour during week of December 10. Second semester: direct instruction from January 28 to March 22 for 20 minutes/4 times a week. From March 23 to June 8, consultation 1 hour during the week of April 29."

EXAMPLE II

Stephen is a 16 year old student in the 10th grade. He receives special education services under two impairment categories, Speech and Language Impaired and Learning Disabled. He experiences language comprehension and production problems and has a fluency impairment. His most difficult classes are social studies and English. He is in a regular education social studies class and a departmentalized special education English class.

The Teacher of the Speech and Language Impaired has developed the following service plan with Stephen, his parents, and his regular education and special education teachers. She will consult once a week for 20-30 minutes with Stephen's

social studies teacher, Mr. Brown. Consultation will address instructional strategies and suggested instruction materials (visual, non-verbal) that will aid Stephen's comprehension of the concepts being taught. She also will obtain lists of vocabulary that will be used that week in the social studies unit.

The Teacher of the Speech and Language Impaired will deliver services in Stephen's English class three times a week. She developed this collaborative instruction program two years ago, and it is enthusiastically endorsed by the special education teacher. Together they will pre-teach the social studies vocabulary that Stephen, as well as other students who are in Mr. Brown's class, will need in social studies. Together with the special education teacher, she will provide direct instruction in listening strategies, non-verbal communication, and oral and written language production skills, all of which are targeted on Stephen's IEP.

Every other week, she will meet with Stephen for 15 minutes to practice fluency control techniques and review Stephen's "speaking situation" diary.

Stephen's IEP will reflect: "Consultation - 20-30 minutes/1 time a week, Direct Instruction - 55 minutes/3 times a week, and 15 minutes every other week."

EXAMPLE III

The description of Linda's speech-language services will encompass a 2 year period.

The first year is Linda's second grade year. Linda has a moderate language comprehension and production problem. She is weak in semantics, morphology, and syntax.

Linda's second grade classroom is known as "a little piece of paradise" in the school district. Her teacher is a seasoned professional who employs the most up to date practices. Her classroom is a model of Cooperative Learning and Thematic Instruction. Semantic Maps are all around the classroom. Most of the instructional activities she employs involve direct, "hands on" experiences, and there is a strong emphasis on visual and graphic representation of what has been learned. She has been using the principles of reading instruction embodied in the New Definition of Reading long before the definition was promoted by the State Department of Education. The teacher is a charter member of the state's Whole Language movement. Philosophically, she believes that good communication skills are among the most important learnings a student can derive from schooling.

Linda's speech-language service delivery plan for the second grade includes consultation with Linda's teacher for 15 minutes every other week to review Linda's morphological or syntactic targets. The teacher monitors Linda's use of this target during cooperative learning activities, class discussion, and written language. All of the other students also have target grammatical structures, for example using "my brother and I" and avoiding the use of "gots" and "ain't".

Linda receives direct speech-language instruction once a week in structured activities to promote the understanding and production of specific morphological structures.

In the 2nd grade, Linda's IEP specifies the following: "Consultation: 15 minutes every other week. Direct instruction: 30 minutes/ 1 time a week."

In the third grade, Linda has a different classroom experience. This classroom is highly teacher directed, extremely quiet, and emphasizes seatwork with workbooks, dittos, and basal readers. Most content subjects are taught via teacher lecture. Reading instruction emphasizes subskill mastery in isolation. Children speak only to answer questions addressed to them by the teacher.

Linda's speech-language service plan is somewhat different this year. The Teacher of the Speech and Language Impaired provides direct instruction in Linda's classroom 3 times a week. She works with Linda and several other children in small groups to pre-teach vocabulary that the teacher will use in content lessons. The pre-teaching lessons employ visual non-verbal materials that facilitate learning of the content concepts. She also has the children develop semantic maps that graphically and pictorially illustrate the concepts. With the teacher, she conducts "brainstorming" activities in which children work in small groups, sharing what they know about content concepts that are about to be taught. From the information generated from the brainstorming sessions, she and the teacher decide which children must be included in the pre-teaching sessions. She also uses activities from the Classroom Listening and Speaking materials in oral language lessons with the whole class. The teacher has asked her to leave the CLAS manual in the classroom so that she could use some of the activities. She and the teacher also plan to go together to a district inservice on cooperative learning.

In addition to the classroom direct instruction, Linda also receives 2 sessions a week of direct instruction to practice on specific morphological and syntactic targets. A strong homework component is part of the grammar program, with the parents agreeing to oversee nightly home practice on targeted structures. Materials and activities are provided by the Teacher of the Speech and Language Impaired to the parents.

Linda's 3rd grade IEP indicates the following: "Direct Instruction: 5 times a week, (3 sessions 45 minutes in length, 2 sessions 25 minutes in length)."

This last example is an illustration of how the speech-language services needed by the child are determined as much by the educational context in which the child must function as by the nature and severity of the communication impairment.

OTHER SERVICES PROVIDED BY TEACHERS OF THE SPEECH AND LANGUAGE IMPAIRED

As a member of the educational team of each building to which he or she is assigned, the Teacher of the Speech and Language Impaired can provide a variety of services that indirectly benefit all students. These are services that are NOT specified on a student's IEP. Students benefiting from these services are not counted on the speech/language caseload. Some of these services are described in the following section.

Pre-Referral Consultation

Teachers of the Speech and Language Impaired are among the approved special education personnel who may provide pre-referral consultation on behalf of students with academic difficulties who have not been referred for special education services. In pre-referral consultation, the Teacher of the Speech and Language Impaired in discussion with general education teachers and other staff may offer suggestions for classroom interventions that may facilitate the successful academic performance of at-risk students having marginal communication skills.

The official procedures for pre-referral consultation include the requirement that the caseload of the Teacher of the Speech and Language Impaired must be in compliance with applicable rules, evaluations and other responsibilities are being conducted within allowable timelines, and that eligible students' IEPs are being fully implemented. Also, formal evaluation of students receiving pre-referral consultation may not be conducted during the pre-referral consultation process.

Additional guidelines for participation in pre-referral consultation may be found on pages 5 and 6 of this document.

Inservice

Conducting inservice education with building staff and parents is an effective means of increasing others' awareness of communication disorders and the effects of communication impairments on the overall education performance of students. Inservice education that presents practical classroom communication intervention strategies is an especially effective means of enhancing the classroom performance of students with communication impairments. Inservice information may be shared in brief presentations to building staff or parents, or through written materials. Publications like the Syndactics, Inc. Bulletin are helpful sources of inservice information.

In addition to conducting inservice as a communication specialist, the Teacher of the Speech and Language Impaired should participate in receiving inservice education along with building instructional staff. The Teacher of Speech and Language Impaired should be knowledgeable about educational advances such as the instructional strategies associated with the new definition of Reading, Cooperative Learning, Whole Language and Thematic Instruction, to cite only a few major areas of instructional advancement. These areas are mentioned because they tie very closely with oral language instruction and promote facilitating classroom communication patterns. By participating in inservice on topics like these, the Teacher of the Speech and Language Impaired can collaboratively explore and plan instructional strategies with classroom staff that are extremely beneficial for students with communication impairments.

Curriculum Development

Participating in curriculum development and review committees presents an excellent opportunity for the Teacher of the Speech and Language Impaired to promote stronger curricular emphasis on spoken communication skills, and to discover ways that the building curriculum can be exploited for providing integrated instruction in language and communication skills.

Teachers of the Speech and Language Impaired who serve programs for low incidence handicapped students (SMI, SXI, TMI, AI, HI, VI, POHI) play a particularly critical role in curriculum development and review. A high program and classroom priority on communication development is especially important for these students, so an appropriate communication curriculum emphasis and direction must be in place to assure optimal communication instruction. Current thinking advocates curricular emphasis on the development of "functional" communication skills which enable students to maximally influence and participate in home, school, and community interactions and activities. The Teacher of the Speech and Language Impaired must be knowledgeable about appropriate communication curriculum approaches for low incidence handicapped students, and actively develop collaborative partnerships with teachers, parents, and other school staff to insure that students receive continuous and maximally integrated communication intervention.

School Improvement

Each school building in Michigan is required to develop a School Improvement plan to address the multiplicity of needs of each school's varied population, including its special education population. School Improvement teams in each building are to plan how to best use the resources available to that school, developing service delivery plans that effectively meet the needs of underachieving students. Since the Teacher of the Speech and Language Impaired is a resource to each building to which he or she is assigned, the manner in which the building's speech-language services are delivered should become part of the School Improvement planning. By participating in building School Improvement planning, the Teacher of the Speech and Language Impaired will be in an excellent position to suggest modifications of service delivery and a variety of options that will be most beneficial to students. School Improvement offers an unexcelled opportunity for the Teacher of the Speech and Language Impaired to participate in redefining his/her role to develop maximally effective and successful and educationally relevant speech-language services.

One area in which the Teacher of the Speech and Language Impaired may make a valuable contribution to building School Improvement teams is the language and communication needs of low achieving students. It is well recognized that many children who become underachievers begin school without the communication and language skills that facilitate successful participation in classroom discourse and literacy instruction. The Teacher of the Speech and Language Impaired can assist other school staff in understanding how classroom discourse patterns can be altered to enable inexperienced and unskilled children to more fully participate and begin to learn to use language as a tool for thinking as well as a means of immediate social communication. Also, classroom curriculum and instructional approaches that

facilitate the development of pre-literate language skills and a literate spoken language style can be encouraged. Information about effective communication and language interventions for children from non-mainstream backgrounds abounds in the professional literature available to public school speech-language pathologists. By sharing this information, the Teacher of the Speech and Language Impaired can make an important contribution to building School Improvement teams in addressing the instructional needs of underachieving students.

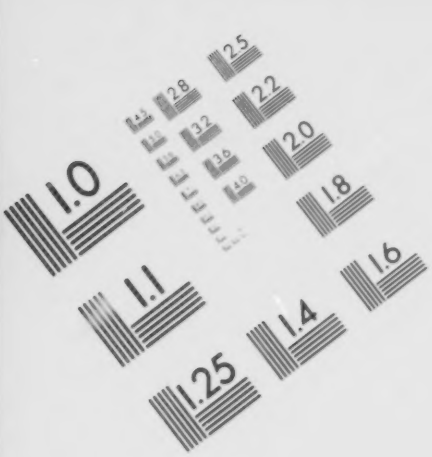
Child Find/Kindergarten Roundup

Another service offered by the Teacher of the Speech and Language Impaired is participation in Child Find and Kindergarten Roundup activities. The benefit of these activities is early identification of students with communication impairments and identification of "at risk" students having marginal communication skills relative to the language and communication demands of schooling. An offshoot of the latter would be participating on district level planning teams for programming for "high risk" preschool children, and curriculum planning teams to strengthen communication programming in early elementary classrooms.

Other Services

It is recognized that Teachers of the Speech and Language Impaired do not limit their roles to the performance of only the above described activities. As contributing members of the school community, the variety and range of services provided by Teachers of the Speech and Language Impaired is limited only by the needs of each building and district and the knowledge, skills and imagination of the individual practitioner. To the extent that the Teacher of the Speech and Language Impaired perceives his or her role in terms of its relevance to the total educational performance of students, his or her value as building and district team member will be determined.

CRITERIA
FOR
THE DISCONTINUATION
OF
SPEECH AND LANGUAGE
SERVICES



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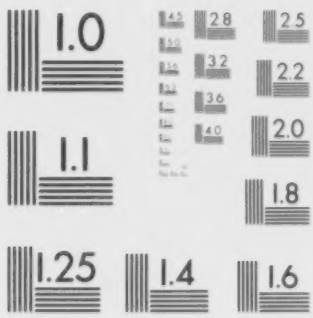

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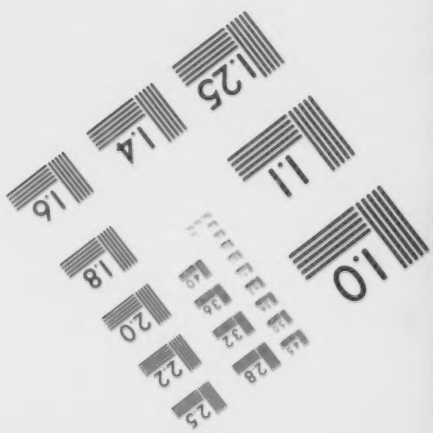

CRITERIA FOR DISCONTINUATION OF SERVICE

Only an IEPC may determine discontinuation of speech and language services. This determination would be considered when the student no longer meets eligibility criteria as speech and language impaired or there are compelling reasons to consider discontinuation of service.

A Multidisciplinary Evaluation Team speech and language evaluation must have been completed prior to the IEPC that considers discontinuation of speech and language services when:

1. The student's **only** eligibility is speech and language impaired, or

2. The student has a secondary eligibility of speech and language impaired in addition to another primary eligibility.

A speech and language MET does NOT need to be completed prior to the IEPC that considers discontinuation of speech and language service for students solely eligible under another eligibility category and who will continue to receive other special education programs and or services.

While in the latter case, a MET is not required, it is necessary to provide documentation that supports the recommendation for discontinuation of services (e.g. evidence of goals and objectives achieved, attendance records, documentation of program modifications, observations of communication effectiveness, etc.)

The following Criteria form along with necessary documentation is brought to the IEPC meeting that will consider discontinuation of speech and language services (R 340.1745).

The form includes both General and Specific criteria. Either one or both sets of criteria may be used when the IEPC recommends discontinuation of speech and language services. A third section "Considerations for Discontinuing Services," includes issues to consider when the IEPC recommends discontinuing speech and language services even though the student may still be exhibiting problems. In such cases, the student and parents should be advised that re-referral for speech and language services may be made at any time. Also see Appendices Q and S.

ERAL CRITERIA FOR DISCONTINUATION OF SERVICES

[ ] I.E.P.C. speech and language goals and objectives have been met.

[ ] Speech and/or language problem no longer exists.

[ ] Speech and/or language problem is no longer a handicapping condition. (i.e. does not meet rating scale criteria for eligibility).

[ ] Speech-language problem no longer interferes with the student's educational performance including academic, and/or vocational functioning.

[ ] Given current medical, dental, neurological, physical, cognitive, emotional, and/or developmental factors, the student's speech-language performance is within his/her expected performance range.

ONSIDERATIONS FOR DISCONTINUING SERVICES

[ ] The pupil has made minimal or no measurable progress over a period of one to two school years of consecutive management strategies. During this time, program modifications and varied approaches have been attempted unsuccessfully. A second opinion may be obtained.

[ ] Limited carryover has been documented due to the pupil's lack of physical, mental or emotional ability to self-monitor or generalize in one or more environments.

[ ] Student's poor or limited attendance precludes progress through therapeutic intervention (_____% of attendance within the last year).

[ ] Parent/guardian or age of majority student requests that speech-language service be discontinued.

[ ] An alternative special education instructional service or program is deemed more appropriate to meet student's communication needs.

NOTE: These are criteria that should be considered whenever the I.E.P.C. will consider no longer providing speech and language services to a student. This sheet (and accompanying documentation) should be brought to the I.E.P.C. meeting along with the MET report.

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SPECIFIC CRITERIA FOR DISCONTINUATION OF SERVICES

Articulation	Language	Fluency	Voice
_____The student maintains a minimum of 75% correct production of error phonemes on TALK probes administered at 8 and 16 week intervals. _____The student has achieved appropriate compensatory behaviors.	_____The student's scores are less than 1 1/3 standard deviations below his/ her expected language performance range on appropriate standardized tests **AND** student has learned compensatory strategies to function successfully in the educational setting. _____The student's language skills are judged to be adequate in remediated area(s) determined by informal measures. _____The student with a handicap which precludes normal expressive language can communicate through the use of an augmentative communication system.	_____The student demonstrates fluency that is within normal limits for age, sex, and speaking situation(s) or exhibits some transitory dysfluencies. _____Student scores 0-4 % on Riley's Stuttering Severity Instrument.	_____The modal pitch is optimal, and/or the laryngeal tone is clear, and/or the intensity is appropriate, and/or nasality is within normal limits a minimum of 75% of the time under varying conditions of use. _____There is improved status of the laryngeal area, such as reduced thickening or reddening, or the reduction or elimination of additive lesions such as nodules. _____The student and/or parent is satisfied with the voice changes and/or the student reports little or no irritation or discomfort in the laryngeal area.

Comments:_____

APPENDICES

VI. APPENDICES

A. Pre referral/child study Team Request
B. Language, Communication Skills and Academic Achievement
C. Plotting and Comparing Scores
D. Functional Communication Assessment
E. Profiles of Test Results
F. Case History
G. Parent Input
H. Classroom Observation Checklist
I. Articulation/Phonology Assessment Materials
J. Language Evaluation Materials
K. Language Sampling Procedures and Analysis
L. Pragmatic Functions and Protocol
M. Stuttering Assessment
N. Voice Assessments
O. Preschool Communication Evaluations
P. Bilingual Oral Language Development Inventory
Q. Speech and Language Case Review
R. Reassessment Tracking Form
S. Talk Format for Articulation
T. Communication Development Information
U. "A Service Delivery Model for Severely Mentally/Multiply Impaired Students"
V. "The Michigan Decision Making Strategy"
W. References

Pre-Referral/Child Study Team Request for Speech and Language

Student _____ Birthdate _____ Age _____ Grade _____

Name of person making request _____

Teacher information is required in order to determine if there is a need for a referral to special education for diagnostic evaluations of speech and language skills. Please answer the questions and return the form to your Teacher of Speech and Language Impaired. He/she will contact you to discuss your concerns.

	Yes	No
1. Does this student avoid speaking in class?	[ ]	[ ]
2. Does he/she communicate with a lot of gestures instead of speech?	[ ]	[ ]
3. Does this student seem frustrated when trying to speak?	[ ]	[ ]
4. Do peers tease this student about his/her communication problems?	[ ]	[ ]
5. Is this student's auditory discrimination adequate for sounds and words?	[ ]	[ ]
6. Does he/she make errors in writing on the same symbols that he/she makes errors on in articulation? (example: spelling)	[ ]	[ ]
7. Do most of his/her mispronunciations during oral reading occur on the articulation error sounds?	[ ]	[ ]
8. Is this student's grammar (syntax) adequate for his/her age?	[ ]	[ ]
9. Do you feel comfortable when you try to communicate with this student?	[ ]	[ ]
10. Does this student's voice quality make it difficult to understand the content of his/her verbal message?	[ ]	[ ]
11. Does this student lose his/her voice during or by the end of the day?	[ ]	[ ]
12. Is this student able to project loud enough to be adequately heard in the classroom during recitation?	[ ]	[ ]
13. Does the student have difficulty with the fluency (hesitation or prolongations) of his/her speech?	[ ]	[ ]
14. Does this student appear to always place one specific ear toward the teacher or other source of sound?	[ ]	[ ]
15. Does this student appear to have more difficulty in understanding material that is presented through the auditory channel than through the visual channel?	[ ]	[ ]
16. Does this student leave out words when asked to repeat a number of words or sentences?	[ ]	[ ]
17. Does this student appear to concentrate on the speaker's lips when listening?	[ ]	[ ]
18. Is this student aware of his/her communication problem?	[ ]	[ ]
19. What is your major concern about this student?_____		
20. Are the parents aware of your concern?	[ ]	[ ]

Disposition: _____ Suggestions Provided _____ Checked Status _____ Special Education Referral

Appendix B

LANGUAGE, COMMUNICATION SKILLS, AND ACADEMIC ACHIEVEMENT

The following summarizes the relationship between various types of speech-language skills and areas of academic achievement.

LANGUAGE SKILLS	ACADEMIC AREAS
AUDITORY PROCESSING Attention-Focus Memory - Long/Short Term Discrimination, Sequencing Sound Blending, Closure	These skills are important to all curriculum areas (reading, writing, math, spelling, social studies and science).
SEMANTICS (Comprehension and Expression) Vocabulary Multiple Meaning Concepts Questions Classifications Comparisons Analogies Synonyms/Antonyms Parts of Speech	Proficiency in semantics affects the ability to understand others and express one's self. Reading comprehension and writing skills are necessary in all curriculum areas and are dependent upon solid semantic skills.
SYNTAX AND GRAMMAR (Comprehension and Expression) Rules for Sentence Types Rules for Question Forms Rules for Parts of Speech	These skills are essential to understanding and using oral and written language.
PRAGMATICS (Language Use) Organizational Skills Sequencing Information Identifying/Using Information Main Idea Induction/Deduction Inferences Judgments Critical Thinking Verbal Appropriateness Nonverbal Communication	These skills are necessary to the understanding and use of language in variable interactions. They are essential to all curriculum areas in listening, reading comprehension, problem solving in math and science as well as in oral and written language usage.

SPEECH PRODUCTION SKILLS	ACADEMIC AREAS
ARTICULATION DISORDERS Oral-Motor Skills	These skills are necessary in oral communication in all curriculum areas and are a basic skill in developing sound/ symbol associations for spelling. In vocational/career choices, speech production deficits can severely limit an individual's potential, regardless of other competencies.
VOICE	Disorders adversely affect the oral communication skills of the student in all curriculum areas.
FLUENCY	Disorders often prevent a student from participating orally in all curriculum areas and severely limit social interactions, resulting in a narrowing of career opportunities.

LANGUAGE SEVERITY SCALE*

STANDARD DEVIATION	-3	-2	-1	$\bar{X}$	+1	+2	+3
LANGUAGE QUOTIENT	55	70	85	100	115	130	145
PERCENTILE		2	16	50	84	98	99
STANINES	1	2	3	4 5	6 7	8	9
PPVT-R EXPRESSIVE ONE WORD VOCAB TEST	55	70	85	100	115	130	145
TELD TOLD-P TOLD-I	1	4	7	10	13	16	18
OTHER							

MILD

1 1/3 - 1 2/3 SD below mean
L.Q. 75 - 80
5th - 10th Percentile
Stanine of 2

MODERATE

1 2/3 - 2 SD below mean
L.Q. 70 - 75
2nd - 5th Percentile
Stanine of 1

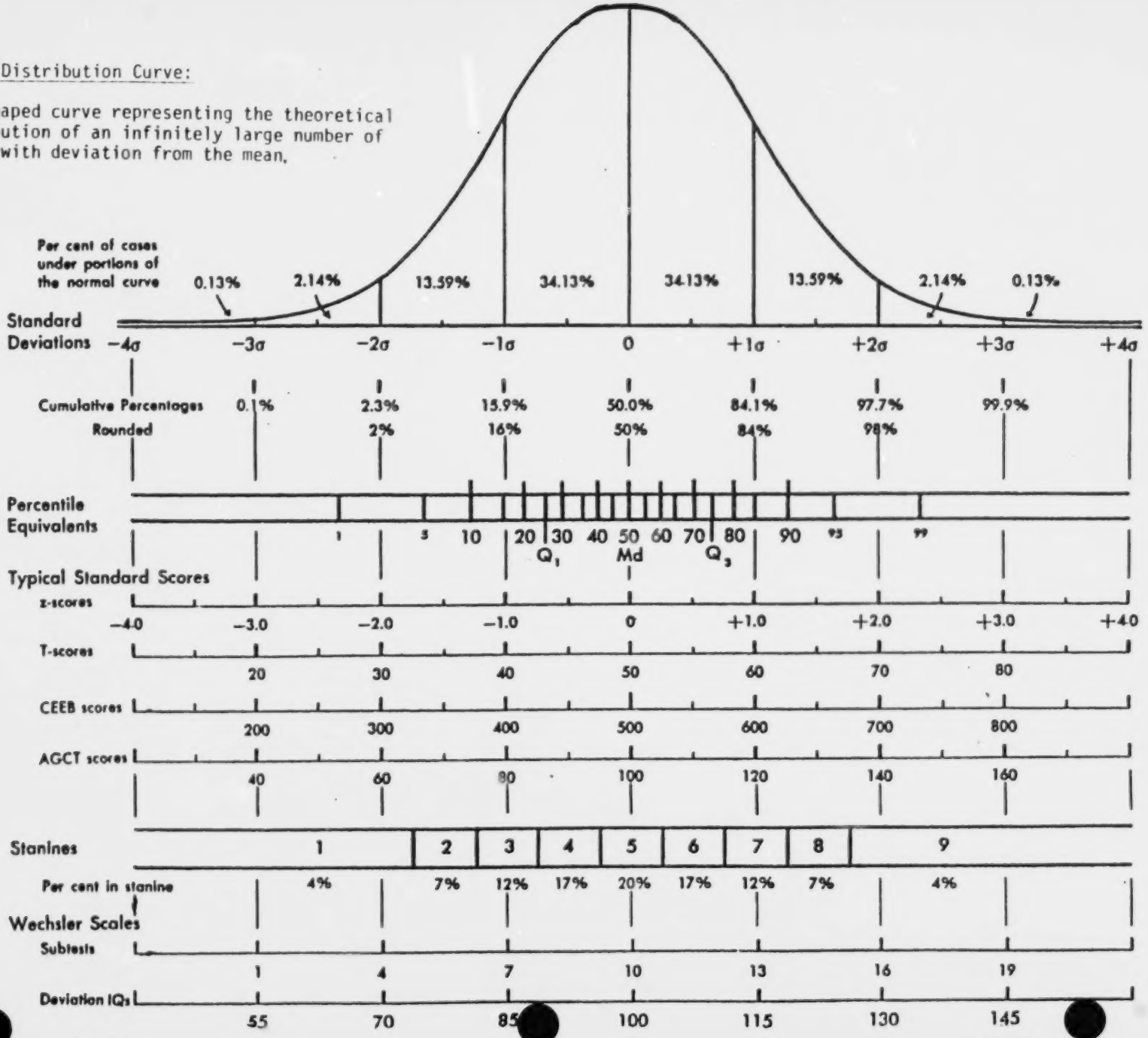
SEVERE

2 or more SD below mean
L.Q. at or below 69
Below 2nd Percentile
Stanine of 1

*Chart provided by Dr. Kathy Pistono

Normal Distribution Curve:

Bell shaped curve representing the theoretical distribution of an infinitely large number of scores with deviation from the mean.



PERCENTILE RANK	STANDARD SCORE MEAN=50 SD=10	STANDARD SCORE MEAN=100 SD=15	STANINE	NORMAL CURVE EQUIVALENTS (NCE's)
99	73	135	9	99
98	71	131	9	93
97	69	128	9	90
96	68	126	8	87
95	66	125	8	85
94	66	123	8	83
93	65	122	8	81
92	64	121	8	80
91	63	120	8	78
90	63	119	8	77
89	62	118	7	76
88	62	118	7	75
87	61	117	7	74
86	61	116	7	73
85	60	116	7	72
84	60	115	7	71
83	60	114	7	70
82	59	114	7	69
81	59	113	7	68
80	58	113	7	68
79	58	112	7	67
78	58	112	7	66
77	57	111	6	66
76	57	111	6	65
75	57	110	6	64
74	56	110	6	64
73	56	109	6	63
72	56	109	6	62
71	56	108	6	62
70	55	108	6	61
69	55	108	6	60
68	55	107	6	60
67	54	107	6	59
66	54	106	6	59
65	54	106	6	58
64	54	105	6	58
63	53	105	6	57
62	53	105	6	56
61	53	104	6	56
60	53	104	5	55
59	52	103	5	55
58	52	103	5	54
57	52	103	5	54
56	52	102	5	53
55	51	102	5	53
54	51	102	5	52
53	51	101	5	52
52	51	101	5	51
51	50	100	5	50

PERCENTILE RANK	STANDARD SCORE MEAN=50 SD=10	STANDARD SCORE MEAN=100 SD=15	STANINE	NORMAL CURVE EQUIVALENTS (NCE's)
50	50	100	5	50
49	50	100	5	50
48	49	99	5	49
47	49	99	5	48
46	49	98	5	48
45	49	98	5	47
44	48	98	5	47
43	48	97	5	46
42	48	97	5	46
41	48	97	5	45
40	47	96	4	45
39	47	96	4	44
38	47	95	4	44
37	47	95	4	43
36	46	95	4	42
35	46	94	4	42
34	46	94	4	41
33	46	93	4	41
32	45	93	4	40
31	45	92	4	40
30	45	92	4	39
29	44	92	4	38
28	44	91	4	38
27	44	91	4	37
26	44	90	4	36
25	43	90	4	36
24	43	89	4	35
23	43	89	3	34
22	42	88	3	34
21	42	88	3	33
20	42	87	3	32
19	41	87	3	32
18	41	86	3	31
17	40	86	3	30
16	40	85	3	29
15	40	84	3	28
14	39	84	3	27
13	39	83	3	26
12	38	82	3	25
11	38	82	2	24
10	37	81	2	23
9	37	80	2	22
8	36	79	2	20
7	35	78	2	19
6	34	77	2	17
5	34	75	2	15
4	32	74	1	13
3	31	72	1	10
2	29	69	1	7
1	27	65	1	1

TABLE 15. *Relationship of Percentile Ranks and Standard Scores.*

%ile Rank	$\bar{X}$ = 100 S. D. = 15	$\bar{X}$ = 100 S. D. = 16	$\bar{X}$ = 50 S.D.=21.06	$\bar{X}$ = 50 S.D. = 10	$\bar{X}$ = 10 S. D. = 3	$\bar{X}$ = 5 S.D. = 2	$\bar{X}$ = 0 S.D. = 1
99+	160	164	99	90	19	9	4.00
99+	159	163	99	89	19	9	3.93
99+	158	162	99	89	19	9	3.87
99+	157	161	99	88	19	9	3.80
99+	156	160	99	87	19	9	3.73
99+	155	159	99	87	19	9	3.67
99+	154	158	99	86	19	9	3.60
99+	153	157	99	85	19	9	3.53
99+	152	155	99	85	19	9	3.47
99+	151	154	99	84	19	9	3.40
99+	150	153	99	83	19	9	3.33
99+	149	152	99	83	19	9	3.27
99+	148	151	99	82	19	9	3.20
99+	147	150	99	81	19	9	3.13
99+	146	149	99	81	19	9	3.07
99+	145	148	99	80	19	9	3.00
99+	144	147	99	79	19	9	2.93
99+	143	146	99	79	19	9	2.87
99+	142	145	99	78	18	9	2.80
99+	141	144	99	77	18	9	2.73
99+	140	143	99	77	18	9	2.67
99+	139	142	99	76	18	9	2.60

TABLE 15. *Relationship of Percentile Ranks and Standard Scores.*

%ile Rank	$\bar{X}$ = 100 S. D. = 15	$\bar{X}$ = 100 S. D. = 16	$\bar{X}$ = 50 S.D.=21.06	$\bar{X}$ = 50 S.D. = 10	$\bar{X}$ = 10 S. D. = 3	$\bar{X}$ = 5 S.D. = 2	$\bar{X}$ = 0 S.D. = 1
99	138	141	99	75	18	9	2.53
99	137	139	99	75	17	9	2.47
99	136	138	99	74	17	9	2.40
99	135	137	99	73	17	9	2.33
99	134	136	98	73	17	9	2.27
99	133	135	96	72	17	9	2.20
98	132	134	95	71	16	9	2.13
98	131	133	94	71	16	9	2.07
98	130	132	92	70	16	9	2.00
97	129	131	91	69	16	9	1.93
97	128	130	89	69	16	9	1.87
96	127	129	88	68	15	9	1.80
96	126	128	87	67	15	9	1.73
95	125	127	85	67	15	8	1.67
95	124	126	84	66	15	8	1.60
94	123	125	82	65	15	8	1.53
93	122	123	81	65	14	8	1.47
92	121	122	79	64	14	8	1.40
91	120	121	78	63	14	8	1.33
90	119	120	77	63	14	8	1.27
88	118	119	75	62	14	8	1.20
87	117	118	74	61	13	7	1.13

TABLE 15. *Relationship of Percentile Ranks and Standard Scores.*

%ile Rank	$\bar{X}$ = 100 S. D. = 15	$\bar{X}$ = 100 S. D. = 16	$\bar{X}$ = 50 S.D.=21.06	$\bar{X}$ = 50 S.D. = 10	$\bar{X}$ = 10 S. D. = 3	$\bar{X}$ = 5 S.D. = 2	$\bar{X}$ = 0 S.D. = 1
86	116	117	72	61	13	7	1.07
84	115	116	71	60	13	7	1.00
82	114	115	70	59	13	7	.93
81	113	114	68	59	13	7	.87
79	112	113	67	58	12	7	.80
77	111	112	65	57	12	6	.73
75	110	111	64	57	12	6	.67
73	109	110	63	56	12	6	.60
70	108	109	61	55	12	6	.53
68	107	107	60	55	11	6	.47
66	106	106	58	54	11	6	.40
63	105	105	57	53	11	6	.33
61	104	104	56	53	11	6	.27
58	103	103	54	52	11	5	.20
55	102	102	53	51	10	5	.13
53	101	101	51	51	10	5	.07
50	100	100	50	50	10	5	0
47	99	99	49	49	10	5	-.07
45	98	98	47	49	10	5	-.13
42	97	97	46	48	9	5	-.20
39	96	96	44	47	9	5	-.27
37	95	95	43	47	9	4	-.33

TABLE 15. *Relationship of Percentile Ranks and Standard Scores.*

%ile Rank	$\bar{X}$ = 100 S. D. = 15	$\bar{X}$ = 100 S. D. = 16	$\bar{X}$ = 50 S.D.=21.06	$\bar{X}$ = 50 S.D. = 10	$\bar{X}$ = 10 S. D. = 3	$\bar{X}$ = 5 S.D. = 2	$\bar{X}$ = 0 S.D. = 1
34	94	94	42	46	9	4	-.40
32	93	93	40	45	9	4	-.47
30	92	91	39	45	8	4	-.53
27	91	90	37	44	8	4	-.60
25	90	89	36	43	8	4	-.67
23	89	88	35	43	8	4	-.73
21	88	87	33	42	8	3	-.80
19	87	86	32	41	7	3	-.87
18	86	85	30	41	7	3	-.93
16	85	84	29	40	7	3	-1.00
14	84	83	28	39	7	3	-1.07
13	83	82	26	39	7	3	-1.13
12	82	81	25	38	6	3	-1.20
10	81	80	23	37	6	2	-1.27
9	80	79	22	37	6	2	-1.33
8	79	78	21	36	6	2	-1.40
7	78	77	19	35	6	2	-1.47
6	77	75	18	35	5	2	-1.53
5	76	74	16	34	5	2	-1.60
5	75	73	15	33	5	2	-1.67
4	74	72	13	33	5	2	-1.73
4	73	71	12	32	5	2	-1.80

He doesn't talk yet; What's to assess?

Level of Intentionality

Available Means

Communicative Needs (Functions)

Social Interaction Skills

Cognitive - Representational Level

Partner Skills

Communication Barriers

How do you assess it?

- Observations
- Interviews
- "Engineered" contexts/interactions
- Tests

DEVELOPMENT OF COMMUNICATIVE INTENT

LEVEL 1. REACTIVE PERLOCUTIONARY (0 - 4 MONTHS)

At this level, the child's behaviors are reflexive and unintentional. Caregivers must anticipate their needs and assign meaning to the child's reactions.

LEVEL 2. PROACTIVE PERLOCUTIONARY (4 - 8 MONTHS)

At this level, the child is beginning to use facial expressions and body movements to demonstrate anticipation of routine events and to exhibit preferences for certain foods, people, or activities. the child does intend to act on his environment. He is no longer strictly a reactive being, but is now reaching out, trying to make things happen.

Caregivers interpret the child's goal directed behavior as a communicative signal. There is not yet intention to communicate on the child's part.

LEVEL 3. PRIMITIVE ILLOCUTIONARY (8 - 9 MONTHS)

At this level, the child begins to understand that his responses can serve as a signal to another person. The student produces old behavioral signals (reaching, tugging, fussing) but he now orients to both a receiver and a referent. The child is aware of the role of the receiver and is becoming fully active as an intentional communicator.

LEVEL 4. CONVENTIONAL ILLOCUTIONARY (9 - 14 MONTHS)

At this level, the child has a repertoire of conventional illocutionary communicative behavior, such as point gestures, give gestures, request gestures, show gestures, and greeting gestures and affirmation and denial gestures. Vocally, the child uses conventional intonation patterns that accompany his gestures. A youngster at this stage is on the threshold of language.

LEVEL 5. LOCUTIONARY (14 MONTHS AND BEYOND)

The student at this level conveys intentions through the use of a formal language system.

Appendix D

COMMUNICATIVE MEANS AND DESCRIPTIONS

MEANS	DESCRIPTION
Crying, tantrums/self injury, proximity	Physical closeness to others and/or objects
Passive gaze	Eye contact without attempts to direct the other's gaze
Active gaze	Eye contact with attempts to direct the gaze of others
Grabs/reaches	
Vocalizations	Includes a wide range of vocal acts and/or noises
Self removal	running away/disappearance - can be used as a form of protest
Enactment (rituals)	Reenactment of partial or entire behavior sequences associated with a desired outcome
Pulling other's hands	Requesting to be tickled by placing other's hands on the desired location
Touching/moving other's face/body	Similar physical manipulation of others
Giving/showing objects	Handing a toy to someone in an effort to establish joint attention and reference
Pointing	Distinct from reaching and actual physical contact
Gesturing	Natural, nonformalized gestures distinct from signing and stereotyped body manipulations
Intonation	Variations in pitch, volume, duration
Aggression	
Echolalia	Delayed or immediate literal repetition
One-word speech or sign	
More complex speech or sign	

FUNCTIONS OF COMMUNICATION

Convey basic physical needs: Hunger, thirst, discomfort, pain, toilet, affection, etc.

Requesting: Asking for an object, action, person, activity or continuation of an activity.

Requesting Help: Asking a person for assistance in getting things, finding things or doing something.

Get Attention: Behaving in a manner intended to attract the partner's attention.

Refusal/Protest: Expressing disapproval or declining to do something.

Greeting: Expression of friendly recognition, usually upon meeting.

Express Emotions: Sadness, happiness, anger, love, dislike, tiredness, etc.

Showing/Labeling: Showing or naming an object, person, or event for a listener.

Commenting: Calling attention to features of an object , person or event.

Giving an Object: The speaker transfers an object to the listener's possession.

Acknowledging/Confirming: To give notice that a previous activity or proposition was received and recognized.

Answering: Responding to a question (who, what, why, where, when, how and yes/no).

Carry on a Conversation: Maintaining the topic, providing more information, turn taking, and conversational termination.

Relate Past Events: Describing an activity or event that has already occurred.

Pretend, Fantasy: Play acting in a novel manner.

Humor: Behaving in a manner intended to entertain.

Appendix D

ASSESSMENT RESOURCES FOR COGNITIVELY IMPAIRED

McLean, J.E., Snyder-McLean, L., and Rowland, C. (1986) The Generic Skills Curriculum for Severely/Profoundly Handicapped Students. Bureau of Child Research, University of Kansas, Parsons Research Center, Box 738, Parsons, KS, 67357. $10.00

Owens, R.E. (1982) Program for the Acquisition of Language with the Severely Impaired. The Psychological Corporation. Harcourt, Brace, Jovanovich, Inc. San Antonio, TX. $89.00

Hanna, R.P., Lippert, E.A., Harris, A.B. (1982) Developmental Communication Curriculum. The Psychological Corporation. Harcourt, Brace, Jovanovich, Inc. San Antonio, TX. $89.00

Neel, R.S., Billingsley, F.F. (1989) Impact: A functional Curriculum Handbook for Students with Moderate to Severe Disabilities. Paul Brookes Publishing Company. Baltimore, MD.

Siegel-Causey, E. and Guess, D. (1989) Enhancing Nonsymbolic Communication Interactions Among Learners with Severe Disabilities. Paul Brookes Publishing Company. Baltimore, MD.

MacDonald, J.D. and Gillette, Y. (1989) ECOScales. Special Press Inc. San Antonio, TX. $49.00

Prizant, B. and Wetherby, A. (1991) Communication and Symbolic Behavior Scales. Special Press Inc. San Antonio, TX. $435.00

Huer, M.B. The Nonspeech Test for Receptive and Expressive Language. (1983) Don Johnson Developmental Equipment. Lake Zurich, IL.

PROFILE OF TEST RESULTS

NAME_____ D.O.B._____ DATE_____

C.A._____ M.A._____ I.Q._____

STANDARD DEVIATIONS			-4	-3	-2	-1	0
PERCENTILES			-.01	.12	.4 2nd	16th	50th
AGE EQUIVALENTS			-6	-4.5	-4 -3	-1.5	XX
STANDARD SCORES/I.Q.			40	55	60 70	85	100
** Extrapolated Measures	(M.A.) age eq.	(I.Q.) st.sc.					
I.Q.:							
WISC-R/K-ABC (VIQ)							
WISC-R/K-ABC (PIQ)							
WISC-R/K-ABC (F.S.)							
S.Binet (L-M) (4th E.)							
McCarthy G.C. Index							
COG. INDICATORS:							
W-J Reason							
W-J-R Fluid Reasoning							
W-J-R Visual Processing							
TONI							
Matrix Analogies							
REC. LANG.:							
PPVT-R							
Recept. 1 Word							
TOAL							
TOLD-P							
TOLD-I							
Fullerton							
P.L.S. (aud. comp.)							
BANKSON							
SICD-R							
SEED							
TACL-R							
CELF-R							
Boehm R							
Lang. Proc. Test							
Vocab. Comp. Scale							
EXP. LANG.:							
Expres 1 Word							
TOAL							
SPELT-P							
SPELT-II							
Fullerton							
SICD-E							
SEED							
CELF-R							
CELI							
The Word Test							
Test of Word Find							
Lang. Proc. Test							
Woodcock Lang. Prof. Battery							
PRAGMATICS:							
TAPS							
Test of Prag. Skills							
Let's Talk Inventory							
MILI							
Analy. Lang. of Learning							

Appendix E

PROFILE OF TEST RESULTS EMI

NAME_____ D.O.B._____ DATE_____

C.A._____ M.A._____ I.Q._____

STANDARD DEVIATIONS			-5	-4.5	-4		-3	-2
PERCENTILES			-.01	-.01	-.01	-.1	-.12	2nd
AGE EQUIVALENTS			-8	-6.5	-6	-5	-4.5	-3
STANDARD SCORES/I.Q.			20	33	40	50	55	70
** Extrapolated Measures	(M.A.) age eq.	(I.Q.) st.sc.						
I.Q.:								
WISC-R/K-ABC (VIQ)								
WISC-R/K-ABC (PIQ)								
WISC-R/K-ABC (F.S.)								
S.Binet (L-M) (4th E.)								
McCarthy G.C. Index								
REC. LANG.:								
PPVT-R								
Recept. 1 Word								
TOAL								
TOLD-P								
TOLD-I								
Fullerton								
P.L.S. (aud. comp.)								
Bankson								
SICD-R								
SEED								
TACL-R								
CELF-R								
Vocab. Comp. Scale								
Lang. Proc. Test								
EXP.LANG.:								
Expres 1 Word								
TOAL								
SPELT-P								
SPELT-II								
Fullerton								
SICD-E								
SEED								
CELF-R								
CELI								
The Word Test								
Test of Word Find								
Woodcock Lang. Prof.								
Lang. Proc. Test								
PRAGMATICS:								
TAPS								
Test of Prag. Skills								
Let's Talk Inventory								
M.I.L.I.								

PROFILE OF TEST RESULTS TMI

NAME_____ D.O.B._____ DATE_____

M.A. = $\frac{C.A. \times I.Q.}{100}$ I.Q. = $\frac{M.A.}{C.A.} \times 100$ C.A._____ M.A._____ I.Q._____

** Extrapolated Measures	(M.A.) age eq.	(I.Q.) st.sc.	Months/Years → 6	9	1	2	3	4	5	6	7	8	9	10
I.Q.:														
WISC-R (Ver.)														
WISC-R (Perf.)														
WISC-R (Full Sc)														
Cattell														
Leiter														
S. Binet (L.-M)														
S. Binet (IV)														
REC. LANG.:														
PPVT-R														
Non-Speech (rec.)														
Recept 1 Word														
TOLD-P														
P.L.S. (aud. comp.)														
REEL														
SICD-R														
SEED														
TACL-R														
EXP. LANG.:														
Non-Speech (exp.)														
Expres 1 Word														
P.L.S. (VERB. AB.)														
REEL														
SICD-E														
SEED														
CELF-R														
CELI														
PRAGMATICS:														
TAPS														
Test of Prag. Skills														
Let's Talk Inventory														
MILI														

Appendix E

PROFILE OF TEST RESULTS SMI

NAME_____ D.O.B._____ DATE_____

M.A. = $\frac{C.A. \times I.Q.}{100}$ I.Q. = $\frac{M.A.}{C.A.} \times 100$ C.A._____ M.A._____ I.Q._____

** Extrapolated Measures	(M.A.) age eq.	(I.Q.) St.Sc.	Months→ .5	1	3	6	9	Years→ 1	2	3	4	5
I.Q.:												
Cattell												
Bayley												
S. Binet (L - M)												
Leiter												
REC. LANG.:												
PPVT-R												
Recept 1 Word												
TOLD - P												
Vineland - (rec.)												
P.L.S. (aud. comp.)												
Bankson												
REEL												
SICD - R												
SEED												
TACL - R												
Wisconsin - Rec												
EXP.LANG.:												
Express 1 Word												
Vineland - (exp)												
REEL												
Birth-to-Three												
Wisconsin - Exp.												
CELI												
PRAGMATICS:												
TAPS												
Test of Prag. Skills												
MILI												

SPEECH/LANGUAGE CASE HISTORY

This information is for the use of school personnel only. Please complete appropriate questions.

Name _____ Sex _____ Birth Date _____

Address _____ Intake Date _____

_____ CA _____

Phone _____ Informant _____

Business Phone _____

Mother _____ Age _____ Occupation _____

Father _____ Age _____ Occupation _____

Brothers and Sisters

Name	Birth Date	Sex	Grade	Speech/Other Problems

Others living in the home:

Other language spoken in the home:

If employed, name of person caring for your child:

Address _____

Phone _____

Prenatal/Neo-Natal History

Pregnancy:
_____ Normal
_____ Difficulties (Specify)
_____ Number of Pregnancies
_____ Order of This Pregnancy
_____ Number of Stillbirths
_____ Number of Miscarriages

Labor:
_____ Length of Hard Labor

Delivery:
_____ Premature (Specify Time) _____
_____ Normal
_____ Late (Specify Time) _____
_____ Instruments Used
_____ Caesarean Section
_____ Breech

Birth:
_____ Birth Weight
_____ Length
_____ Required Oxygen
_____ Jaundiced
_____ Problems During First Two Weeks
_____ Health (Specify)
_____ Feeding
_____ Sleeping

Appendix F

Developmental Age History

Sitting _____
Walking _____
First Tooth _____
Toilet Trained _____ Day _____ Night

Medical History

_____ Illnesses and/or Hospitalization (Specify)
_____
_____ High Fevers Temperature _____
Length of Time _____
_____ Ear Infections
_____ Hearing Problems
_____ Hearing Tested Date _____ Place _____
Recommendations _____
_____ Vision Problems (Specify)
_____ Dental Problems (Specify)
_____ Allergies (Specify)
_____ Medication Taken Regularly
_____ Family Health Problems

Speech/Language History

_____ Did your child babble and coo during infancy?
_____ When did your child say his/her first word?
_____ When did your child begin to use phrases?
_____ Does not make all speech sounds.
_____ Repeats words. When?
_____ Voice is hoarse, husky, nasal, or denasal (circle)
_____ Do others understand your child's speech?
_____ Has had a speech/language evaluation.
Date _____ Place _____
Recommendations _____
_____ Has had speech/language therapy.
Date _____ Place _____
_____ Is your child self-conscious about his/her speech?

Behavior

_____ No specific problems
_____ Easily frustrated
_____ Difficult to discipline
_____ Short attention span
_____ Plays well with other children
Ages of playmates _____
Favorite activities _____
Do you have a pet? (Specify type and name.) _____

PARENT INPUT

Child's Name:_____ Birthdate:_____

I am concerned about my child's: (check all that apply)

_____ speech sound production
_____ voice quality
_____ fluency
_____ language development

My concern is that my child:

I have noticed that my child: (check all that apply)

_____ has trouble following directions
_____ doesn't seem to hear me
_____ doesn't seem to understand what is said
_____ has a limited vocabulary
_____ is reluctant to talk
_____ doesn't use sentences
_____ echoes what I say
_____ doesn't speak clearly
_____ is only understood by family
_____ cannot repeat speech sounds I make
_____ usually leaves off parts of words
_____ may say a sound clearly but is not able to use it in a word
_____ may say a word clearly but is not able to use it in a sentence
_____ uses gestures regularly to ask for things or get my attention
_____ makes vowel sounds to ask for things
_____ uses his own language
_____ becomes upset when not understood
_____ doesn't seem to know the names of household items
_____ doesn't make sounds and jabber during play
_____ has problems eating (sucking, swallowing, chewing; drooling, gagging, choking, coughing)
_____ doesn't enjoy listening to stories or watching TV
_____ doesn't ask questions to gain information
_____ repeats sound/words frequently
_____ doesn't have a clear voice
_____ cannot get what he needs independently in our home
_____ doesn't play with other children

Appendix G

My child:

most often says the following sounds/words:

would let me know it's snack time by:

indicates he/she wants me to do something by:

would let me know he/she doesn't want something by:

My child's speech has improved within: (please circle)

the last year	Yes	No
the last six months	Yes	No

I see my child's greatest strength as:

_____ Signature

_____ Date

CLASSROOM OBSERVATION CHECKLIST

	Not Observed	Behavior Displayed 1-5 Times	Frequently Observed 6 Times or More
1. Interaction with teacher/peers			
2. Confidence in response			
3. Attending to task			
4. Perseveration			
5. Accuracy of response			
6. Appropriateness of response			
7. Frequency of response in comparison to peers			
8. Reaction response by teacher/peers to student's utterance			
9. Topic maintenance			
10. Excessive gestures			
11. Prosody/juncture			
12. Incomplete thought expression			
13. Echolalic			
14. Stallers/false starts/non-specific words			

Appendix I

Articulation/Phonology Assessment Materials	Age Range	Developmental Norms	Profile of Errors	Standard Scores	Word Stimuli	Sentence Stimuli
Arizona Articulation Proficiency Scale (AAPS) -Western Psychological Services	3 - 0 to 12 - 0	X	X	X	X	X
Assessment Link Between Phonology and Articulation (ALPHA) -Lingui-Systems	4 to 9	X	X	X		X
The Assessment of Phonological Processes (APP) -Slosson Educational Publication -Interstate	2 to 8	X	X			
Deep Test of Articulation (DTA) -Stanwix-House, Inc.	3 to adult				X	
Fisher-Logemann Test of Articulation Competency (FLTAC) -Houghton-Mifflin Co.	preschool to adult		X		X	X
Goldman-Fristoe Test of Articulation (GFTA) -American Guidance Service	6 to 16+		X		X	X
Khan-Lewis Phonological Analysis (KLPA) -American Guidance Service	2 to 5-11		X			
Photo-Articulation Test (PAT) -Interstate	3-0 to 11-11		X		X	X
Predictive Screening Test of Articulation (PSTA)	Grade 1				X	X
Templin-Darley -Bureau of Educational Research and Service	3+				X	X
Test of Minimal Articulation Competence (T-MAC) -Harcourt-Brace -Charles E. Merril	3+	X	X		X	

Language Evaluation Materials

This is a compilation of tests often used in Michigan. This does not represent an exhaustive listing nor does it imply endorsement of any of these tests.

Test	Age Range	Response NV	Response V	Morph Synx	Sem	Prag
Analysis of the Language of Learning	5 to 12		X		X	
Auditory-Visual-Single Word Picture Vocabulary Test	12 to 17	X		X		
Bankson Language Screening Test	3 to 7 1/2	X	X	X	X	
Birth to Three Development Scale	0 to 3	X	X			
Boehm Test of Basic Concepts - R	3 to 5	X		X	X	
Bracken Basic Concept Scale	2 1/2 to 7 - 11	X		X	X	
Carrow Elicited language Inventory	3 to 7 - 11	X		X		
Clark-Madison Test of Oral Language	4 to 8		X	X		
CELF-R (Clinical Evaluation of Language Fundamentals)	5 to 18	X	X	X	X	
Detroit Tests of Learning Aptitude	3 to 19	X	X	X	X	
Diagnostic Achievement Battery	6 to 16	X	X	X	X	
DIAL-R (Developmental Indicators of Learning)	2 1/2 to 7	X	X	X		
Early Language Milestones	0 to 3	X	X			
Expressive One-Word Picture Vocabulary Test	2 to 11-11		X		X	

Appendix J

Language Evaluation Materials

Test	Age Range	Response NV	Response V	Morph Synx	Sem	Prag
Fluharty Preschool Speech/ Language Test	2 to 6		X	X		
Language Processing Test	6 to 12		X		X	
M I L I (Multi-Level Informal Language Inventory)	5 to 12		X	X	X	
Non Speech Test for Receptive/ Expressive Language	0 to 4	X				
Northwestern Syntax Screening Test	3 to 8	X	X	X	X	
PPVT-R (Peabody Picture Vocabulary Test - Revised)	1-9 to 33-8	X			X	
Preschool Language Assessment Instrument	2 to 5	X	X	X	X	X
Preschool Language Scale	1 to 7	X	X	X	X	
REEL (Receptive-Expressive Emergent Language Scale)	0 to 3	X	X			
Receptive One-Word Picture Vocabulary Test	2 to 11-11	X			X	
SICD-R (Sequenced Inventory of Communication Development)	0 to 4		X			
SPELT-P (Structured Photographic Expressive Language Test)	3-0 to 5-11		X	X	X	
SPELT-II (Structured Photographic Expressive Language Test)	4-0 to 9-5		X	X	X	

Language Evaluation Materials

Test	Age Range	Response NV	Response V	Morph Synx	Sem	Prag
TACL-R (Test for Auditory Comprehension of Language)	3 to 9 - 11	X		X	X	
TELD (Test of Early Language Development)	3 to 7 - 11	X	X	X	X	
TLC (Test of Language Competence)	5 to 18-11		X	X	X	
TOAL (Test of Adolescent Language)	12 to 18-5	X	X	X	X	
TOLD-I (Test of Language Development - Intermediate)	8-6 to 12-11		X	X	X	
TOLD-P (Test of Language Development - Primary)	4 to 8-11	X	X	X	X	
Test of Pragmatic Skills	3 to 8		X			X
Test of Problem Solving	6 to 11-11		X	X	X	
Test of Word Finding	6-6 to 12-11		X		X	
TOWL (Test of Written Language)	7 to 18-11	X		X	X	
Token Test for Children	3 to 12	X		X	X	
Vineland Social Maturity Scale	0 to 25	Interview/Observation				
Woodcock Language Proficiency Battery	3 to 80		X		X	
The Word Test	7-0 to 11-11		X		X	
Utah Test of Language	1 to 15	X	X	X	X	
Vocabulary Comprehension Scale	2 to 4 1/2	X	X	X	X	

Appendix K

ELICITATION OF LANGUAGE SAMPLES

In order to obtain the most complete representative sample of language (quality and quantity), it is preferable to use a combination of sampling techniques. The following procedures are suggested to help you determine which sampling techniques will obtain the information you need.

I. Spontaneous Interaction

A. Observe student in unstructured situation (free play or conversation).

B. Observe student in play structured around puppets or other three-dimensional objects.

II. Elicited Interaction

A. Have student tell a familiar story (e.g., "The three Bears").

B. Have student tell a story which he/she has read or which has been read to him/her.

C. Have student explain how to play a game.

D. Have student tell a story about a picture.

E. Have student tell about a movie or T.V. program which he/she has seen.

F. Have student give directions to his/her home or other familiar place.

G. Have student answer unrelated questions (e.g., what if; convince me; why do you think).

III. Specific Tasks

A. Have student describe a car, room, house, etc., following a model presented by the teacher.

B. construct a situation (e.g., birthday party) using props and then elicit specific structures.

C. Have student make up sentences using syntactically important words such as words with different morphological endings (walk, walks, walked, walking) or function words (because, if, or).

D. Have student complete 'Story Reformulation' task (enclosed).

LANGUAGE SAMPLE TASKS

Informing Speech Events

1. Provide the child with a hand held movie player and a cassette. Use the following directions: "This is a story about _____. Watch it all and when it's through I want you to tell me what happened." Prompt - "Tell me a story about what you saw."

2. Give the student one of two viewmasters and a disk. Explain to him or her that both of you have the same disk and that his or her job is to describe to you a picture so that you can find the same picture on your viewmaster.

3. Give the student one of two viewmasters and explain to him or her that you want him or her to tell you a story about the pictured sequence. Tell the student that you will write down everything in sequence while s/he is telling the story. Caution the student to look at all the pictures before telling you the story.

   Materials: Viewmasters, Sneak Previews pocket movie viewer and cassette, high interest viewmaster disks.

Instructing Speech Events

1. Give the student seven playing cards in an arrangement laid flush to the table. show him or her that you have more cards than necessary to construct an identical sequence. Explain to the student that s/he has to tell you how to make an identical arrangement. You may want to use a barrier during this task with older students.

2. Give the student the assembled Voltron toy and show him your unassembled model. Explain to the student that s/he has to tell you how to make your Voltron exactly like his or hers. You may want to use a barrier during this task with linguistically advanced students.

3. Give the student a sheet of paper with a diagram drawn on it. Explain that s/he will have to tell you how to make a diagram identical to the one in front of him or her. Use of a barrier and varying diagram complexity are means of increasing task difficulty.

4. Give the student one assembled airplane and show him your identical, unassembled airplane. Explain to the student that s/he has to tell you how to build your airplane by looking at his or her model.

5. Give the student a press-out sticker page and tell him or her that you are going to make stickers. Explain to the student that his or her task is to tell you how to make an identical sticker (e.g., color, size, shape). Use a barrier during this task.

   Materials: Biplane glider (2), playing card sets (2), pencil and paper, sticker art kits.

Appendix K

Disputing Speech Events

1. Tell the student that you and him/her are going to play a game. Say to the student that you don't always remember all of the rules and that you really like to win. Commit several rule violations during the game. If the child "catches you cheating", query him/her as to why what you did was wrong.

2. Make the student aware of a particular controversy and elicit their stance on the issue. Take an opposing stance and "debate" the merits of your position with the student. Social events are good starting points (e.g., freshman shouldn't be allowed to stay out later than juniors because they're younger).

3. Have the student participate in role-played interactions involving store returns and refunds. have the student encounter both agreeable and disagreeable clerks who query hi/her reasons for returning/exchanging the items.

LANGUAGE ANALYSIS PROCEDURE

MEAN LENGTH OF UTTERANCE

This handout provides the guidelines for computing mean length of utterance in morphemes (MLU) from a transcription of a child's speech.

Selecting the utterances to include in the computation.

1. Omit unintelligible or partially unintelligible utterances.

2. Use consecutive utterances (number them to help check your computation).

3. As a rough guideline, the total number of utterances included in a count should exceed 50; 100 is preferable to strive for in a free speech sample.

4. Problems: If any of the following problems occur in the transcript, compute MLU with and without the designated utterances to see if it makes a difference. (Exclude the indicated utterances if they are markedly skewing the estimate. Familiarity of listener and setting may also affect MLU.

    a. High rate of imitation of previous speaker
    b. High rate of self-repetition (note: Bloom excludes immediate, exact self repetitions)
    c. High rate of WH and Y-N questions-answers (note: limit Q-asking!)
    d. High rate of long "List" sentences e.g., naming objects in book or room; or song fragments, counting routines, and nursery rhymes.

Counting Morphemes in each utterance.

1. Remember that a morpheme is a minimal meaningful unit of a language.

2. Begin counting with the child's first numbered utterance. For each numbered utterance, record the number of morphemes.

3. Count all compound words such as night-night and birthday as one morpheme unless one of the two units of the word occurs separately in the transcript. If one of the two units occurs separately, count the compound word as two morphemes.

4. Count all irregular past tense forms of the verb as one morpheme, e.g., went/, did/.

5. Count as one morpheme all nouns with diminutive endings (e.g., doggie/) unless the noun to which it is attached occurs separately in the transcript. If the noun does occur separately, count the noun and the diminutive ending as two separate morphemes.

6. Count as a separate morpheme all possessive endings, plural endings, negative contractions (e.g., 't in can't), third person singular verb endings, regular past tense verb endings, and progressive verb endings (-ing) unless the noun or verb to which it is attached does not occur separately, do not segment the inflectional ending as one morpheme.

7. Count as one morpheme auxiliaries (e.g., is) and catenatives (e.g., gonna, hafta).

8. Do not include non-communicative noises such as aah and oh in the count. Include items such as this and that in the count.

Computation Procedures

1. Determine the total number of utterances for which morpheme length was counted.

2. Add up the number of morphemes in each utterance to find the total number of morphemes in the sample.

3. To find MLU, the average length of an utterance in morphemes, divide the total from 2. above by the total from 1. above.

CD 440
Fall 1975
Chapman

MLU AND MLR AND DSS

There are currently many ways of analyzing the structure of language from a language sample. One of the most common methods is determining Mean Length of Utterance (MLU). MLU is usually calculated as the total number of morphemes in a given number of consecutive utterances divided by the number of utterances.

"During the normal language acquisition process, most children pass through a modulation of meaning period around 18 to 40 months of age. This acquisition period is best for using the MLU as a sensitive quantitative measure since it assesses morphological development . . . the effectiveness of the MLU as a sensitive quantitative measure plateaus after this period."*

The Mean Length of Response (MLR) is based on the premise that the child's language abilities increase as the length and structural complexity of the utterances increases. MLR is calculated by dividing the total number of words by the total number of utterances in the sample. This type of analysis is a rough index of structural change in language development.

Developmental Sentence Scoring (DSS) is a process of language sample analysis developed by Laura Lee. It is a quantitative measure of the child's increasing structural complexity especially as it relates to development of verb forms. This method can also provide qualitative data by determining the variety, frequency, and various types of constructions or forms. Since a child's verb complexity continues to develop for a longer period of overall development, the DSS may be used for older children who are beyond the range of the MLU.

Once a language sample has been studied it may help to direct the clinician in the selection of an appropriate standardized instrument/s to be administered.

Lucas, E. (1982). Semantic and Pragmatic Language Disorders. Aspen Publishers, Baltimore, MD.

Table 7. Procedures for in-depth analysis of children's free-speech samples

Content	Procedure	Sample size	Range of use	Reference
Syntax	Developmental Sentence Types (DST)	100 utterances	22 months–6 years	Lee, 1966
	Developmental Sentence Analysis (DSS)	50 complete sentences	3–7 years	Lee, 1974
	Language Sampling, Analysis and Training (LSAT)	100 utterances	2–10 years*	Tyack and Gottsleben, 1974
	Language Assessment, Remediation and Screening Procedure (LARSP)	30 minutes 100–200 utterances	22 months–5 years*	Crystal, Fletcher, and Garman, 1976
	Scale of Children's Clausal Development (SCCD)	Transcript of unspecified length	18–40 months 1.5–5 years*	Dever and Bauman, 1974 Dever, 1978
	TALK-Assessing Current Functioning	6–8 pages (200 + utterances)		
	Co-occurring and Restricted Structure Procedure (CORS)	Representative sample (usually requiring several samples in varying situations)	1.5–5 years*	Muma, 1973
	Linguistic Analysis of Speech Samples (LASS)	75–100 utterances	5–11 years	Engler, Hannah, and Longhurst, 1973
	Assigning Structural Stage (ASS)	At least 50 utterances in at least two contexts	18 months–7 years	Miller, this volume
Semantics	Brown's 14 Grammatical Morphemes	500–700 utterances	2–5 + years	Brown, 1973
	Semantic roles in one-word period	50 + utterances	10–30 months	Chapman, this volume
	Brown's prevalent multi-term semantic relations	50 + utterances	20–48 months	Brown, 1973; Retherford, Schwartz and Chapman, in press
	Semantic relations expressed in conjunctions	50 + utterances	29 months–10 years	Clancy, Jacobsen, and Silva, 1976 (see Table 13)
	Semantic fields: Semantic roles expressed in *Wh*-questions	50 + utterances	18 months–8 years	this volume (see Table 14)
Phonology	Natural process analysis	Representative sample	1–12 years*	Ingram, 1976; 1980
	Natural Process Analysis (NPA) Procedure for Phonological Analysis of Continuous Speech Samples	90 words, first occurrence of each	1–12 years*	Shriberg and Kwiatkowski, 1980
Communicative Use	Communicative Intentions	50 + utterances	10 months +	Chapman, Chapter 4 this volume
	Topic initiation/speaking turn	50 + utterances	10 months +	Bates and Johnston, 1978

*Approximate range of use; not specified by author(s)

Reference: Jon F. Miller, Assessing Language Production in Children. Table 7, p.30. University Park Press, 1981

LANGUAGE QUESTIONNAIRE

1. What is your name?
2. How old are you?
3. When is your birthday?
4. Have you ever played baseball? Pretend I don't know anything about it. Can you tell me how to play it?
5. What is your favorite TV show?
6. When is it on.
7. What is it about?
8. Tell me a word that rhymes with: cake
   pail
   hair
9. Tell me how they are alike: flower and tree
   ocean and lake
   winter and summer
   TV and radio
10. When do you brush your teeth?
11. Why do you wear a coat?
12. What day is today?
13. What day was it yesterday?
14. What day will it be tomorrow?
15. Have him/her count from 1-10 and 60-100.

Reference: Grand Rapids Public Schools

Appendix K

Reformulation Approach

Language Sample

PROCEDURE: Record all responses. Ask for and record the following data: "Please tell me your name, grade, teacher's name, and school".

Instruct the student: "This is a language screening test to see how well you can understand and retell a complex story. I want you to listen carefully to this story so that you can retell it in your own words. Tell the story as completely as you can so that a listener who does not know the story would fully understand it."

Read the story to the student

OR

Have the student listen to a taped story

Read Segment A and have the student retell it and tape his response.

Read Segment B and have the student retell it and tape his response.

Segment A:

There was a rich old woman who was sick because she had cancer. She planned to will all of her money to her faithful secretary, Jenny, instead of her son, Bill, because he had been mean to her. But then Bill, who was a cancer specialist, promised to cure her if she gave him all the money. Since she did want to live, she decided that she would give him all the money provided that he marry Jenny and cure the cancer. However, her problem was that she knew that Jenny would refuse to marry Bill inasmuch as he was very nasty and did not love her.

Segment B:

Since the sick, old, rich lady knew that she had to change her son from a nasty person to a nice doctor, she ordered her bank to buy a medical building with an office and clinic for him. She told Bill that he could have the building for free, provided that he hire the secretary and under the condition that he develop a good bedside manner while he was curing her cancer. Well, the story ended OK in that as Bill gradually worked with Jenny he fell in love with her and changed into a warm, loving person. Therefore, all the mother's wishes came true because, one, Bill married Jenny; two, he found a cure for Mom's cancer; and three, they all lived happily together in Mom's big house and spent her money.

from LSHSS, October 1980
Gerald E. Chappell

Analysis Procedure for Story Reformulation

1. Transcribe student's story.

2. Identify and number communication units. A communication unit is:

   a. basic sentence clause (modified subject plus predicate) with all co-joined and/or embedded noun/relative/subordinate clausal constructions.
   b. co-ordinate sentence clauses (each having a subject) connected by "and" or "so" are marked as separate communication units. (He had to marry the secretary #1 and he had to become a nice doctor #2).

3. Count the number of words in the communication.

   a. count compound words as one word.
   b. count catenatives as one word (gonna, hafta).
   c. count contracted words as two words (he'd/he would).

4. Divide number of words by number of communication units for MLU in words.

5. Mark and count all reason, condition, and time subordinate clauses.

6. Mark and count all single word adjectives, adverbs, and relative clauses that modify key semantic elements only one time, (disregard repeated uses of the same adjective or adverb). Do not count demonstrative pronouns (that) or genitive (her) or quantifiers (one) or possessives (mom's).

7. Mark and count any inaccuracies in pronoun reference.

8. Count the number of "present/missing events" using the following check-list. If the general deep meaning is represented in some form, count the item regardless of how it is expressed. Events which must be represented are:

   a. reference to the lady's sick status with some additional description
   b. reference to the secretary as the intended benefactor of the lady's money
   c. reference to the son with some description of him
   d. reference to the son's cancer-curing commitment for the money
   e. reference to the mom's acceptance thereof and agreement to make Bill the benefactor
   f. reference to mom's added stipulation that the son would have to marry Jenny
   g. reference to the problematic unworkability of the marriage idea
   h. reference to the mom's acquisition of a medical unit for the son
   i. reference to the mom's need to change the son's bad personality
   j. reference to the mom's gift of the medical unit to the son pending his hiring of Jenny
   k. reference to the young falling in love and getting married
   l. reference to the curing of the cancer, or to living with mom, or to spending the money

9. "Screen in" for further evaluation of all students:

   a. whose mean length of communication unit is less than the cut-off criterion for each grade level.

      4th grade - shorter than 6.31 words
      5th grade - shorter than 6.39 words
      6th grade - shorter than 7 words
      7th grade - shorter than 7.04 words

   b. whose combined use of modifiers and subordinate clauses is:

      2 or less for 4th and 5th grade
      3 or less for 6th and 7th grade

   c. whose combined errors in content coverage and pronoun reference are 12 or more at any grade level

From: "Oral Language Performance of Upper Elementary School Students Obtained by Story Reformulation" by Gerald E. Chappell. Language, Speech & Hearing Services in Schools, Oct. 1980, Vol. XI, #4, pp. 236-250.

PRAGMATIC FUNCTIONS OF LANGUAGE

FUNCTION	USE	EXAMPLES	SPONTANEOUS SPEECH SAMPLE
INSTRUMENTAL	Language used to satisfy material needs	"Give me that." "I don't want that."	
REGULATORY	Language used to direct others (request for action)	"Go to lunch." "Do that again." "Help me."	
INTERACTIONAL	Language serves the "me and you" function used in interaction between self and others	"Hello." "Let's play ball."	
PERSONAL	Language used to express feelings and attitudes	"I'm tired." "That's silly."	
HEURISTIC	Language used to investigate reality and learn about things	"What's that called?" "Where's Tom?"	
IMAGINATIVE	Language serves the "Let's Pretend" function used to create child's own environment	"I'm the F.B.I."	
INFORMATIVE	Language used to communicate new information about something	"I got a dog for Christmas." "My sister is getting married."	

Appendix L

PRAGMATIC PROTOCOL

(Prutting & Kirchner: Pragmatic Aspects of Language, JSHD, May, 1987, p.117-119 Vol. 52, #2)

Communicative Act	A	I	NO	Examples & Comments
Verbal Aspects				
A. Speech Acts				
1. Speech act pair analysis				
2. Variety of speech acts				
B. Topic				
3. Selection				
4. Introduction				
5. Maintenance				
6. Change				
C. Turn Taking				
7. Initiation				
8. Response				
9. Repair/revision				
10. Pause time				
11. Interruption/overlap				
12. Feedback to speakers				
13. Adjacency				
14. Contingency				
15. Quantity/conciseness				
D. Lexical selection/use across speech acts				
16. Specificity/accuracy				
17. Cohesion				
E. Stylistic variations				
18. The varying of communicative style				
F. Paralinguistic Aspects				
19. Intelligibility				
20. Vocal intensity				
21. Vocal quality				
22. Prosody				
23. Fluency				
Nonverbal Aspects				
G. Kenesics and Proxemics				
24. Physical proximity				
25. Physical contacts				
26. Body posture				
27. Foot/leg and hand/arm movements				
28. Gestures				
29. Facial expression				
30. Eye gaze				

A-Appropriate I-Inappropriate No-No Opportunity to Observe

EXAMPLES using the PRAGMATIC PROTOCOL (Prutting & Kirchner)

VERBAL ASPECTS

Speech act pair analysis

Initiates directives, queries, and comments; responds to directives by complying; responds to queries; responds appropriately to requests; and acknowledges comments made by the speaker. Appropriate behavior can be verbal or nonverbal as in the case of taking appropriate action to a direction or request.

Variety of speech acts

The partner shows both appropriate use of and diversity in the number of different speech acts he can accomplish.

Topic

a. Selection
b. Introduction
c. Maintenance
d. Change

The Speaker/listener is able to make relevant contributions to a topic, is able to make smooth changes in topic at appropriate times in the discourse, is able to select appropriate topics for discussion given the context and participants, and is able to end discussion of a topic at an appropriate place in the discourse.

Turn taking

a. Initiation
b. Response
c. Repair/revision
d. Pause time
e. Interruption/overlap
f. Feedback to listener
g. Adjacency
h. Contingency

Behavior is judged in relationship to both speaker and listener in the dyad. Initiating conversation and responding to comments made by the speaker, asking for clarification when a portion of the message is misunderstood and revising one's own message to facilitate understanding, avoiding interrupting or talking before the other partner is finished, giving feedback to the speaker as a way of moving the conversation forward, appropriate length of pauses in the conversation to support timing relationships in the conversation, and making comments relevant and informative.

LEXICAL SELECTION/USE

Specificity/Accuracy

the ability to be specific and make appropriate lexical choices to clearly convey information in the discourse.

Appendix L

Prutting, cont.

SPECIFYING RELATIONSHIPS BETWEEN AND ACROSS SPEECH ACTS

Cohesion
Relatedness and unity in the discourse. One is able to follow the conversation, and the ideas are expressed in a logical and sequential way.

Stylistic variances
The ability to adjust speech style to the listener.

PARALINGUISTIC ASPECTS

Intelligibility
Vocal intensity
Vocal quality
Prosody
Fluency
Speech that is clear; not too loud or too soft; appropriate in quality; and shows appropriate use of intonation, stress, and pitch to support the communicative/ linguistic intention of the message.

NONVERBAL ASPECTS

Physical proximity
Physical contacts
Body posture
Foot/leg and hand/arm movements
Gestures
Facial expression
Eye gaze
Use of nonverbal aspects of communication that demonstrate level of affiliation between partners, aid in regulating discourse turns, and may supplement or support linguistic aspects of the message.

STUTTERING SEVERITY INSTRUMENT

Glyndon D. Riley

Frequency (Use A or B, not both)

A. For reader, use 1 and 2.

1. Job Task

Percentage	Task Score
1	2
2-3	3
4	4
5-6	5
7-9	6
10-14	7
15-28	8
29 and up	9

2. Reading Task

Percentage	Task Score
1	2
2-3	2
4-5	5
6-9	6
10-16	7
17-26	8
27 and up	9

B. For nonreaders

Picture Task

Percentage	Task Score
1	4
2-3	6
4	8
5-6	10
7-9	12
10-14	14
15-28	16
29 and up	18

Total Frequency Score A 1 & 2 or B ☐

Duration

Estimated Length of Three Longest Blocks	Task Score
Fleeting	1
One half second	2
One full second	3
2 to 9 seconds	4
10 to 30 seconds (by second hand)	5
30 to 60 seconds	6
More than 60 seconds	7

Total Duration Score ☐

Physical Concomitants

Evaluating Scale: 0 = none; 1 = not noticeable unless looking for it; 2 = barely noticeable to casual observer; 3 = distracting; 4 = very distracting; 5 = severe and painful looking.

1. Distracting Sounds. Noise breathing, whistling, sniffing, blowing, clicking sounds..... 0 1 2 3 4 5

2. Facial grimaces, jaw jerking, tongue protruding, lip pressing, jaw muscles tense..... 0 1 2 3 4 5

3. Head movement. Back, forward, turning away, poor eye contact, constant looking around..... 0 1 2 3 4 5

4. Extremities movement. Arm and hand movement, hands about face, torso movement, leg movements, foot tapping or swinging..... 0 1 2 3 4 5

Total Physical Concomitant Score ☐

TOTAL OVERALL SCORE ☐

CHILDREN'S CONVERSION TABLE I (USE TO AGE 18)

TOTAL OVERALL SCORE	PERCENTILE	SEVERITY
0-5	0-4	NON-HANDICAPPING CONDITION
6-15	5-40	MILD
16-23	41-77	MODERATE
24-45	78-100	SEVERE

Appendix M

STUTTERING ASSESSMENT CHECKLIST

1. BREATHING
   a. Appears OK _____
   b. Runs out of breath easily _____
   c. Speaks on reserve air _____
2. VOICE
   a. Quality appears normal for age _____
   b. Quality is different _____
      Describe _____
   c. Can sustain "ah" for 5 sec. _____
   d. Pitch breaks noted _____
3. RESONANCE
   a. Sounds hypernasal _____
   b. Sounds hyponasal _____
   c. Mixed nasality _____
   d. Nares move inappropriately _____
   e. Nasal emission verified with mirror _____
4. ARTICULATION Formal Testing Completed
   a. Articulation normal _____
   b. Specific errors noted _____
   c. Previous errors noted in file _____
   d. Previous articulation problem but OK now _____
   e. Stuttering reportedly began just during articulation therapy _____
5. SEVERITY OF STUTTERING
   a. Primarily repetitions _____
   b. Primarily prolongations _____
   c. Mixed dysfluency pattern _____
   d. % stuttering conversation _____
   e. % stuttering reading _____
   f. Length of blocks _____
   g. Observed secondaries: _____
6. MEMORY FOR UNRELATED SENTENCES
   a. At age level _____
   b. Below age level _____
   c. 2 or more years below age level _____
7. ORAL COORDINATION (Fletcher)
   a. At age level _____
      Occasional exceptions to this _____
   b. Below age level: Specify _____
8. STUTTERS SINGING _____ STUTTERS WHISPERING _____
9. LANGUAGE DIFFERENCES/PROBLEMS NOTED: _____

Name _____ Clinician _____

BUFFALO RESONANCE PROFILE

EXAMINATIONS BY THE SPEECH PATHOLOGIST

Name _____ B.D. _____ Age _____ Sex _____

Rater _____ Date _____ Time of Day _____ Place _____

1. Hypernasality
   - No
   - Yes
   - Hypernasal Sounds 1 2 3 4 5 6 7

2. Hyponasality
   - No
   - Yes
   - Hyponasal Sounds 1 2 3 4 5 6 7

3. Nasal Emission of Sounds
   - No
   - Yes
   - Sounds Emitted 1 2 3 4 5 6 7

4. Facial Grimaces (including nares constriction)
   - No
   - Yes
   - Describe _____ 1 2 3 4 5 6 7

5. Articulation Defectiveness
   List defective sounds (in addition to those listed above) _____
   _____ 1 2 3 4 5 6 7

6. Intelligibility
   - Normal
   - Poor

COMMENTS: _____

INSTRUCTIONS:

A. Circle the appropriate descriptive term under each item.

B. For each item not normal or adequate, circle a number on the scale for that item. Do not mark between numbers.
   KEY: 1 = slight deviation
   4 = moderate deviation
   7 = severe deviation

C. List sounds where indicated.

Appendix N

BUFFALO VOICE PROFILE

VOICE PROBLEMS OF CHILDREN

Name _____ B.D. _____ Age _____ Sex _____

Rater _____ Date _____ Time of Day _____ Place _____

1.	Laryngeal Tone Normal Breathy Harsh Hoarse	1	2	3	4	5	6	7
2.	Laryngeal Tension Normal Hypertense Hypotense	1	2	3	4	5	6	7
3.	Vocal Abuse No Yes	1	2	3	4	5	6	7
4.	Loudness Normal Too Loud Too Soft	1	2	3	4	5	6	7
5.	Pitch Normal High Low	1	2	3	4	5	6	7
6.	Vocal Inflections Normal Monotone Excessive	1	2	3	4	5	6	7
7.	Pitch Breaks None Amount	1	2	3	4	5	6	7
8.	Diplophonia None Amount	1	2	3	4	5	6	7
9.	Resonance Normal Hypernasal Hyponasal	1	2	3	4	5	6	7
10.	Nasal Emission No Yes	1	2	3	4	5	6	7
11.	Rate Normal Fast Slow	1	2	3	4	5	6	7
12.	Overall Voice Efficiency Adequate Inadequate	1	2	3	4	5	6	7

Circle the appropriate descriptive term under each item. For each item not normal or adequate, circle a number on the scale for that item. Do not mark between numbers.

Key: 1=slight deviation 4=moderate deviation 7=severe deviation

COMMENTS: _____

Iowa Pressure Articulation Test measures sounds and words in order of decreasing discrimination levels*

Discrimination Level	Sounds	Words
1	/s-, sk-/	sun, skates
2	/-k-, sm-, -sm, sn-, str-/	pocket, smoke, possum snowman, string
3	/ʃ-, -z-, -k , st-/	shoe, scissors, cracker stairs
4	/-s-, -ʃ-, kr-/	dresses, dishes, crayons
5	/-g-, -s, sp-, tr-, gr-, -g , - k, -pt, kl-, gl-, -mps/	wagon, mouse, spoon, tree grass, tiger, fork, stopped clown, glasses, stamps
6	/k-, g-, -g, -ʃ, dʒ-, -ʃ , bl- , -ks/	cat, girl, dog, fish, jump washer, blocks, socks
7	/-k, br-, dr-, tw-/	truck, bread, drum, twins
8	/t-, f-, -f, -p , pl-, -lf/	two, telephone, knife, paper planting, wolf

Key: Level 1 most discriminating, Level 8 least discriminating. Sounds are shown according to position in word, e.g. initial /s-/, medial /-s-/, and final /-s/.

*Discrimination levels from Morris, H.L., Spriestersbach, D.C., and Darley, F.L. "An Articulation Test, for Assessing Competency of Velopharyngeal Closure," J.S.H.R., 4, 1961, pp. 48-55.

Words from Templin, M.C. and Darley, F.L. "The Templin-Darley Tests of Articulation - A Manual and Discussion of Articulation Testing," Ed. 2, Iowa City: Bureau of Educational Research and Service University of Iowa, 1969.

(D. Kenneth Wilson, Ph.D., State University of New York, Buffalo, New York, U.S.A.)

Appendix O

Teacher Input

Language Checklist for Preschoolers

Student _____ Date _____

Teacher _____ Grade/Program_____

Cognitive Skills	Yes	No
1. Does the student respond to sound?	[ ]	[ ]
2. Does the student focus/track objects or people?	[ ]	[ ]
3. Does the student initiate vocalizations	[ ]	[ ]
4. Does the student initiate actions?	[ ]	[ ]
5. Does the student demonstrate understanding of object permanence?	[ ]	[ ]
6. Does the student know the function of familiar objects?	[ ]	[ ]
Receptive Language		
1. Does the student recall information presented verbally?	[ ]	[ ]
2. Does the student point to basic vocabulary? _____objects _____adjectives _____prepositions _____actions _____people (Check the categories that apply.)	[ ]	[ ]
3. Does the student follow directions? _____one step _____two step _____three step	[ ]	[ ]
4. Does the student understand appropriate number concepts?	[ ]	[ ]
5. Does the student know appropriate colors?	[ ]	[ ]
Expressive/Functional Language Skills		
1. Does the student use a specific action/sound to get attention or make a request?	[ ]	[ ]
2. Does the student have yes/no response?	[ ]	[ ]
3. Does the student name basic vocabulary? _____objects _____people _____adjectives _____actions _____prepositions Identify words noted _____	[ ]	[ ]
4. Does the student use pronouns appropriately?	[ ]	[ ]
5. Does the student respond appropriately to the topic?	[ ]	[ ]
6. Does the student take turns appropriately?	[ ]	[ ]

7. Does the student perseverate or display echolalia? [ ] [ ]

8. Does the student initiate conversations? [ ] [ ]

9. Does the student have sufficient communication skills to express basic needs/feelings to share information? [ ] [ ]
   Explain how child does this:_____

   _____

COMMENTS:_____

_____

Circle student's main vehicle for communication:

gestures single words phrases sentences

Give an example of the child's response: _____

_____

It is my opinion that these behaviors:

_____ do not interfere with the child's performance in the educational setting.

_____ do interfere with the child's performance in the educational setting.

_____ _____

Signature of Classroom Teacher Date

Appendix O

Teacher Input

Articulation Checklist for Preschoolers

Student:_____ **Date:** _____

Teacher:_____ **Grade/Program:**_____

Please fill out this form and return it to the Teacher of the Speech and Language Impaired. Your observation will help the therapist determine if this child's communication problem is affecting his/her educational performance. Thank you.

		Yes	No
1.	Does this student have a lot of pronunciation/enunciation errors?	____	____
2.	Is this student's intelligibility reduced (due to articulation errors) to the extent that you find it difficult to understand what he/she says at times? If yes, check appropriate descriptions: ___ 3 or 4 words are difficult to understand ___ 2 or 3 times per day words are not understood ___ considerable difficulty most of the time	____	____
3.	Does this student appear to avoid talking?	____	____
4.	Is this student aware of his/her communication problem?	____	____
5.	Does this student appear to be a social isolate?	____	____
6.	Does this student's speech problem distract you sometimes from what he/she is saying?	____	____
7.	Does this student appear frustrated when trying to speak?	____	____
8.	Do you ever hear this student correct his articulation errors by himself/herself?	____	____

I have noticed the following behaviors: ___thumb sucking, ___drooling, ___mouth breathing,

___ear pulling, ___inappropriate tongue positions. ___Others. Describe_____

_____

_____

___ Connected speech is easily understood.

___ Connected speech is understood though noticeable in errors.

___ Connected speech is difficult to understand.

___ Connected speech is generally always difficult to understand.

_____ _____

Date Classroom Teacher's Signature

Teacher Input

Fluency Checklist for Preschoolers

Student:_____ **Date:** _____

Teacher:_____ **Grade/Program:**_____

		Yes	No
1.	Does the student stutter more in certain situations? Describe_____	____	____
2.	Does the student repeat __whole words or __beginning sounds?	____	____
3.	Does the student's speech contain filler speech such as "um," "oh," etc.?	____	____
4.	Does the student appear frustrated when he/she communicates?	____	____
5.	Does the student exhibit excessive behaviors such as eye blinking, noticeable facial tension or extraneous body movements?	____	____
6.	Does the student have noticeable pitch variations?	____	____

Concerns: _____

_____

_____

_____ _____

Date Classroom Teacher' Signature

Appendix O

PRESCHOOL COMMUNICATION EVALUATION

This is a compilation of tests often used in Michigan. This does not represent an exhaustive listing nor does it imply endorsement of any of these tests.

I. Tests which assess general or global language skills:

Birth-to-Three Developmental Scale - Revised
Cognitive, Linguistic and Socio-Communicative Scales
Early Language Milestones
Preschool Language Scale
Receptive-Expressive Emergent Language Scale
Reynell Developmental Language Scales
Sequenced Inventory of Communication Development-Revised
Test of Early Language Development
The Nonspeech Test for Receptive/Expressive Language
Environmental Prelanguage Battery

II. Tests used to evaluate how the child understands what is being said:

Bowen-Chalfont Receptive Language Inventory
Bracken Basic Concept Scale
Miller-Yoder Language Comprehension Test
Peabody Picture Vocabulary Test - Revised
Receptive One-Word Picture Vocabulary Test
Test for Auditory Comprehension of Language - Revised
Vocabulary Comprehension Scale

III. Tests used to evaluate how well the child uses language:

Action Picture Test
Environmental Language Inventory
Expressive One-Word Picture Vocabulary Test
Preschool Language Assessment Instrument
Structured Photographic Expressive Language Test - Preschool
Test of Pragmatic Skills
The Bus Story - A Test of Continuous Speech

IV. Tests used to evaluate how clearly the child uses sounds in words and words in sentences:

Arizonia Articulation Proficiency Scale
Assessment Link Between Phonology and Articulation
Fisher-Logemann Test of Articulation
Goldman-Fristoe Test of Articulation
Khan-Lewis Phonological Analysis
Photo Articulation Test
Screening Test for Developmental Apraxia of Speech
Slosson Articulation, Language Test with Phonology

Bilingual Oral Language Development (BOLD) Inventory

The Bilingual Oral Language Development (BOLD) Inventory, an oral language inventory, was developed for elementary school children. The form can be used to record observations of the child's performance in both the native language and English. A plus (+) should be recorded for each communicative behavior that is performed effectively; A minus (-) should be recorded for each communicative behavior in which a deficiency is noted. The behaviors listed on the inventory are described below.

1. *Comments on own actions.* The child comments on personal actions while these actions are taking place. Example: "I'm working fast."
2. *Comments on others' actions.* The child comments on actions of others in the environment. Example: "He broke the pencil."
3. *Describes experiences accurately.* The child is able to give an accurate description of personal experiences.
4. *Describes events sequentially.* The child describes a sequence of events in the order in which they occurred.
5. *Attends to the speaker.* The child allows communicative partners to speak and shows appropriate listening behavior.
6. *Follows directions.* The child follows directions presented in the classroom setting.
7. *Initiates interactions.* The child initiates conversations with classmates.
8. *Takes turns during conversation.* The child alternates appropriately as speaker and listener during conversations with peers.
9. *Maintains topic.* The child is able to maintain a topic of discussion over a series of utterances during interactions with peers.
10. *Answers questions.* The child gives appropriate responses to simple questions.
11. *Requests attention.* The child uses language to seek the attention of others.
12. *Requests information.* The child asks questions to obtain information about people, actions, events, etc.
13. *Requests action.* The child uses language to direct the actions of others.
14. *Requests clarification.* The child requests clarification when verbal statements made by others are not understood.
15. *Expresses needs.* The child uses language to inform others of personal needs.
16. *Expresses feelings.* The child uses language to express feelings such as joy, fear, and anger.
17. *Describes plans.* The child describes plans for events that will take place in the future.
18. *Supports viewpoints.* The child expresses personal opinions and is able to provide a logical rationale for those opinions.
19. *Describes solutions.* The child describes solutions for simple problem situations.
20. *Expresses imagination.* The child uses language to express imagination through drama, storytelling, puppet shows, etc.

Appendix P

Sample Communication Skills Inventory for Bilingual Children

Bilingual Oral Language Development

Child's Name:

Birthdate:

Child's First Language:

Child's Second Language:

Communicative Behavior	First Language	Second Language
1. Comments on own actions	1. _____	1. _____
2. Comments on others' actions	2. _____	2. _____
3. Describes experiences accurately	3. _____	3. _____
4. Describes events sequentially	4. _____	4. _____
5. Attends to the speaker	5. _____	5. _____
6. Follows directions	6. _____	6. _____
7. Initiates interactions	7. _____	7. _____
8. Takes turns during conversation	8. _____	8. _____
9. Maintains topic	9. _____	9. _____
10. Answers questions	10. _____	10. _____
11. Requests attention	11. _____	11. _____
12. Requests information	12. _____	12. _____
13. Requests action	13. _____	13. _____
14. Requests clarification	14. _____	14. _____
15. Expresses needs	15. _____	15. _____
16. Expresses feelings	16. _____	16. _____
17. Describes plans	17. _____	17. _____
18. Supports viewpoints	18. _____	18. _____
19. Describes solutions	19. _____	19. _____
20. Expresses imagination	20. _____	20. _____

From Mattes, L.J., & Omark, D.R. (1984) *Speech and Language Assessment for the Bilingual Handicapped.* San Diego: College-Hill Press. This form may be reproduced for nonprofit educational use.

SPEECH AND LANGUAGE CASE REVIEW

This case review format provides a framework for decision making that can help an IEPC determine whether a student should continue to receive Speech-Language services. This is often a difficult decision for the IEPC to make and it is extremely helpful if the situation can be examined relative to the specific variables contained in the case review.

The format lends itself to group use although it can be completed by an individual who obtains information from the appropriate sources.

1. Expected response to treatment:
   - 0 Therapy is not warranted based upon test results
   - 1 Student has plateaued; maintaining level of function based on test results and/or extended observation
   - 2 Therapy maintains function and prevents deterioration; potential for additional progress limited
   - 3 Continues to make significant progress (or) has not yet had treatment but appears to have significant potential for progress

2. Possibility of needs being met by others in educational or community environment:
   - 0 Needs could be met by others; i.e., teacher/parents/self/others
   - 1 Parent and/or teacher could meet all or most needs with short term consultation from therapist
   - 2 Parent/teacher could meet all or most needs with regularly scheduled consultation from therapist
   - 3 Not possible to meet student's needs except with direct therapy

3. Student's ability to self-correct:
   - 0 Errors are inconsistent and can be easily self-corrected
   - 1 Errors are inconsistent and can be self-corrected with gentle reminders and/or modeling
   - 2 Errors are consistent; stimulable only with difficulty
   - 3 Errors are consistent; not stimulable at this time

4. Follow-up at home:
   - 0 Little or none
   - 1 Poor
   - 2 Fair
   - 3 Good

5. Speech model in home:
   - 0 Parent(s) speech similar to that of student
   - 1 Sibling(s) at home with similar speech patterns
   - 2 Parents aware of speech problems; attempt to help
   - 3 Use of correct speech is a high priority in the home

6. Student behavior:
   - 0 Behavior is consistently negative or unmanageable
   - 1 Behavior often makes therapy difficult
   - 2 Generally cooperates in therapy setting
   - 3 Behavior enhances therapy

7. Student attendance:
   - 0 Absent 50% or more
   - 1 Absent 30-49%
   - 2 Absent 10-29%
   - 3 Absent less than 10%

8. Prior treatment:
   - 0 Treatment for 2-3 years with minimal or no change
   - 1 Treatment for 1-2 years with minimal or no change
   - 2 Prior treatment did not fully address student needs
   - 3 Less than one year of prior treatment

9. Communications skills re: daily living:
   - 0 Communication skills adequate for all or most basic needs
   - 1 Communication skills adequate for many basic needs
   - 2 Communication skills adequate for some basic needs
   - 3 Communication skills adequate for few or no basic needs

10a. Severity: (for LANGUAGE cases)
   - 0 Language skills equal to or greater than expectancy
   - 1 Language skills between 1 1/3 - 1 2/3 S.D. below expectancy
   - 2 Language skills between 1 2/3 - 2 S.D. below expectancy
   - 3 Language skills more than 2 S.D. below expectancy

Expectancy based on chronological age and/or cognitive ability as appropriate

10b. Severity: (for cases other than language)
   - 0 Little or no effect on communication abilities
   - 1 Mild effect on communication abilities
   - 2 Moderate effect on communication abilities
   - 3 Severe effect on communication abilities

***Be sure that only <u>one</u> score for item #10 is included in the rating.**

11. Number of speech/language impairments:
   - 0 No delay or mild delay in only one area of speech/language development
   - 1 Mild delay in two or more areas of speech/language development
   - 2 Moderate to severe delay in one area of speech/language development
   - 3 Moderate to severe delay in two or more areas of speech/language development

12. Importance of therapy relative to other needs of student:

    0 Least important aspect of educational program
    1 Of less importance than classroom activities
    2 Equally important with classroom activities
    3 Necessary in order for classroom activities to show progress

DIRECTIONS:

Rate the student on each item, add the scores from all 12 items, and divide the total by 12. The resulting figure, along with the specific ratings obtained on each item, will provide an excellent discussion guideline for the IEPC as the group determines whether or not Speech-Language services are warranted.

TOTAL OF ALL ITEMS _____ DIVIDED BY 12 EQUALS _____

0.0 to 1.1 Average	Service likely not needed
1.2 to 1.7 Average	Service often not needed
1.8 to 2.6 Average	Some type of service likely needed
2.7 to 3.0 Average	Service definitely needed

Developed by Tuscola Intermediate School District

Appendix R

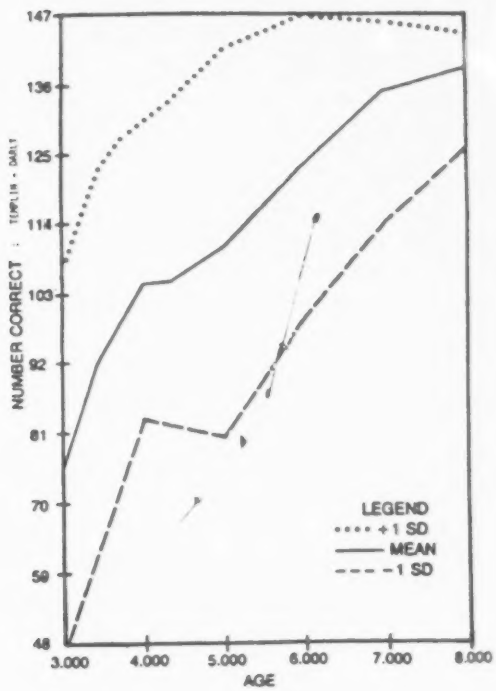
PERIODIC REASSESSMENT

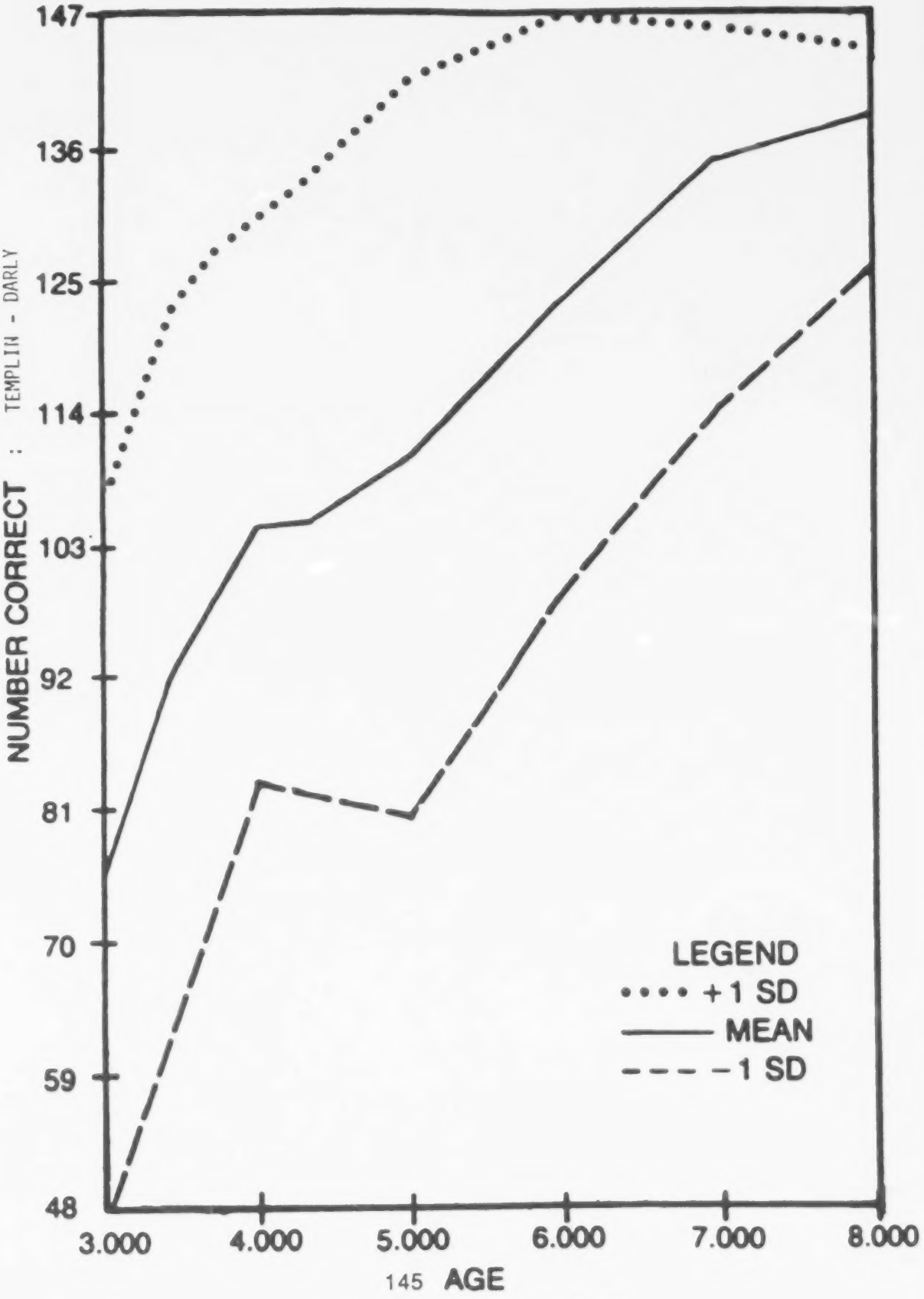
The following form is used to track a student's progress in articulation development. It is based on the use of the Templin-Darly because that test yields a total overall score for articulation and has been well standardized. The form displays the total scores on the Templin-Darly on the vertical axis and student ages on the horizontal axis.

A student's performance is plotted by placing a dot where the score received on the T-D intersects his/her age on the horizontal axis. The norms for the mean, one standard deviation below the mean and one standard deviation above the mean are already plotted on the form.

Here is an example of how the form would look if the following student's progress had been plotted:

At 4 years-8 months, John received a score of 70 on the T-D. At 5-3, he received a score of 79. At 5-6, a score of 83. At 5-10, a score of 92 and at 6-2, a score of 108 which is less then one standard deviation from the norm. He then displayed only age appropriate articulation errors. He received no other service after periodic reassessment.




147
136
125
114
103
92
81
70
59
48
NUMBER CORRECT : TEMPLIN - DARLY
3.000
4.000
5.000
6.000
7.000
8.000
145 AGE
LEGEND
+1 SD
MEAN
-1 SD

Appendix S

TALK Format

Additional Discontinuation Procedures: Articulation

1. TALK Format

   Assessment of the student's articulation skills in connected speech should be completed utilizing a three minute TALK format, as described by Diedrich and Bangert (1980). The student is engaged in conversation for three minutes during which time the speech-language pathologist counts the target phoneme(s) as correct or incorrect. Talking by the speech-language pathologist is limited to that amount necessary to keep the student talking and is included in the total three minutes. The percentage of correct productions is then computed.

   The TALK probes may be administered at two week intervals during therapy to obtain discontinuation criteria. When the student achieves a minimum of 75% correct production on two successive TALK probes, the level of speech service may be changed.

   Follow-up TALK probes should be completed at eight and sixteen week intervals to insure that carryover has been maintained. The student is eligible for discontinuation of service when the level of accuracy as dictated by the IEPC has been achieved or when the student maintains a minimum level of 75% accuracy over a minimum of four TALK probes.

2. Discontinuation Criteria Chart

   The student's Communication Rating Scale: Articulation shall be updated to reflect his/her current performance levels. A statement regarding the student's improvement may be recorded in the "Comments" section. The Criteria shall be completed to document the student's eligibility for discontinuation of services..

William M. Diedrich and Jeff Bangert, Articulation Learning Houston: College-Hill Press, 1980, p. 239

TERMINATION CRITERIA FOR /r/ AND /s/

Articulation Learning by William M. Diedrich (College-Hill Press: 1980) reports the findings of a massive study of elementary school children enrolled in articulation therapy for /r/ and /s/ therapy, and to see if other dismissal criteria might be more economical.

THE SUBJECTS

600 children in grades 1-6 who worked with 20 different therapists were used in the study. Some of the children were seen for individual therapy, however, the bulk were seen in groups of from 2-5 children. Most children were seen one or two times per week in 20-30 minute sessions, however, some therapists were on a block system. Children on block schedules were seen four times per week for eight weeks, followed by eight weeks of no therapy, and followed again by eight weeks of therapy four times per week. Children were selected because either /r/ or /s/ were their primary impairment. None had histories of hearing impairment, special education, or speech mechanism problems.

THE STUDY

Therapists did not know the purpose of the study, and they were instructed to enroll and dismiss children from therapy as they usually do. There was one exception, however. After dismissal, the therapists were to recheck the child's error phoneme every four weeks, and again the following fall.

WHAT THERAPISTS WERE DOING

Diedrich discovered that what therapists were using for dismissal criteria was 100% correct responses in conversational speech. After criteria was reached, therapists chose to retain children in therapy for an additional six weeks for /r/, and an additional eight weeks for /s/.

WHAT FOLLOW-UP TESTING REVEALED

Follow-up testing of the children's error phoneme every four weeks and the following fall after dismissal revealed some interesting data:

1. 81% of the subjects who were responding at greater than or equal to 75% correct in May held that level of performance in September. Looking at this figure the other way around, only 19% of the subjects who were performing at least 75% correct needed further therapy the following fall.

2. Approximately 12% of the subjects who were performing at below 75% in May were found to be performing above 75% when retested in September. These were the subjects who you think might make it over the summer, and sure enough, they do.

3. In putting these results together, one comes to the following figure: only approximately 7% of the children needed to continue therapy in September.

DISCONTINUATION RECOMMENDATIONS

According to Diedrich, "little change occurred with additional therapy . . . after the 75-85% correct level in conversation."

As a result of this study, Diedrich made one strong recommendation for setting up discontinuation criteria for /s/ and /r/ students: therapists should consider terminating therapy when a child has reached a 75% correct level in conversational speech on two consecutive probes completed two-weeks apart. The conservative clinician might consider setting this criteria at 80-85%. There is no reason tha. the results of this study would not generalize to sounds other than /s/ and /r/.

TABLE 15

Brown's Fourteen Grammatical Morphemes and Their Order of Acquisition

Order of Acquisition	Morpheme	Specific Form(s)
1	Present Progressive	-ing
2 - 3	Prepositions	in, on
4	Plural (regular)	-s, -es, etc.
5	Past-Irregular	came, ran, etc.
6	Possessive	-'s
7	Uncontractible Copula	is, am, are (as in "she <u>is</u> pretty")
8	Articles	a, the
9	Past Regular	-d, -ed, -/t/
10	Third Person Regular	-s, -/z/, etc. (as in: "She run<u>s</u>")
11	Third Person Irregular	does, has (as in: "They do" vs. "She <u>does</u>")
12	Uncontractible Auxiliary	is, am, are (as in: "They <u>are</u> running")
13	Contractible Copula	-'s, 'm, 're (e.g., "She'<u>s</u> pretty"
14	Contractible Auxiliary	-'s, 'm, -'re (e.g., (They'<u>re</u> running"

Appendix T

Source: C. Prutting. Process: The action of moving forward progressively from one point to another on the way to completion. Journal of Speech and Hearing Disorders, 1979, 44, pp. 24-26.

A. SUMMARY OF STAGES FOR ACQUISITION OF PRAGMATICS

Prelinguistic (birth–9 mo)	*Stage I (9–18 mo)*	*Stage II (18–24 mo)*	*Stage III (2–3 yr)*	*Stage IV (3+ yr)*	*Stage V (Communicative Competence—Adult)*
Perlocutionary Acts gazing, crying, touching, smiling vocalizations, grasping, sucking, laughing (Bates, 1975)	Functions instrumental regulatory interactional personal heuristic imaginative informative (Halliday, 1975)	Functions pragmatic mathetic interpersonal textual ideational (Halliday, 1975)	Responds to contingent queries, types of revisions function of linguistic development (Gallagher, 1977)	Sustains topic (Bloom, Rocissano, & Hood, 1976)	Knowledge of who can say what, in what way, where and when, by what means, and to whom (Hymes, 1971)
Illocutionary Acts nonverbal and speechlike giving, pointing, showing (Bates, 1975)	Intentions label response request greeting protesting repeating description attention (Dore, 1974)		Rapid topic change (Keenan & Schieffelin, 1976)	Systematic changes in speech depending on listener (Shatz & Gelman, 1973; Gleason, 1973; Sachs & Devin, 1976)	Behavior speakers and listeners attend to:
Turn taking (Bruner, 1975)	Verbal Turn taking procedures employed (Bloom, Rocissano, & Hood, 1976)			Indirectives and hints (Ervin-Tripp & Mitchell-Kernan, 1977)	Quality: informative but not too informative.
	New Information coded first (Greenfield & Smith, 1976)			Productive use of contingent queries to maintain the conversation (Garvey, 1975)	Quality: contribution should be true.
				Role-playing, ability to temporarily assume another's perspective (Anderson, 1977)	Relation: be relevant.
				Metalinguistic awareness, ability to think about language and comment on it (Gleitman, Gleitman, & Shipley, 1972; de Villiers & de Villiers, 1974)	Manner: avoid obscurity, ambiguity, be brief and orderly (Grice, 1975)

B. Summary of Stages for Acquisition of Semantics and Syntax

Prelinguistic (birth–9 mo)	*Stage I (9–18 mo)*	*Stage II (18–24 mo)*	*Stage III (2–3 yr)*	*Stage IV (3+yr)*	**Stage V** *(Communicative Competence—Adu*
	Semantics first-words learned are general nominals, specific nominals, action words (Nelson, 1973) Overextensions regarding shape, size, function, etc. (Clark, 1973) Functions performative indicative object negative indication volition negative volition volitional object agent action/state of agent object action state of object dative object assoc. with object or location animate assoc. with object or location location modification of event (Greenfield & Smith, 1976)	Semantics 2-word utterances agent-object agent-action action-object location nomination possessive attributive nonexistence rejection denial question recurrence acknowledgment (Bloom, 1970, Brown 1973) Syntax 2-word utterances S-V-O-A clause level phrase level (Crystal et al., 1976)	Semantics 3–4 word utterances new structures word level (Crystal et al., 1976) Syntax 3–4 word utterances S-V-O-A new structures at clause level new structures at phrase level 14 morphemes in order of acquisition: present progressive, on, in, plural, past irregular, possessive, uncontractible copula, articles, past regular, third-person singular regular, third-person singular irregular, uncontractible auxiliary, contractible copula, contractible auxiliary	Semantics word pairs—more and less, dimensional terms, before and after, verbs of expression, of causation and possession and transfer (summarized by Dale, 1976) New structures at word level (Crystal et al., 1976) Syntax new structures at clause and phrase levels, recursion, error strategies employed (Crystal et al., 1976) embeddings (Brown, 1973)	Generates and understands infinite combinations from a set of finite symbols (Chomsky, 1965)

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C. Summary of Stages for Acquisition of Phonology

Prelinguistic (birth– 9 mo)	*Stage I (9–18 mo)*	*Stage II (18–24 mo)*	*Stage III (2–3 yr)*	*Stage IV (3+yr)*	*Stage V (Communicative Competence—Adult*
Discriminates phonemes during first month (Morse, 1974; Eimas, 1974)	Presented in order of acquisition first syllables CV or CVCV reduplicated	Phonological processes are employed from 18 mos. to 4 yrs. They are simplifying processes and affect classes of sounds. These are: syllable structure processes, assimilatory processes, substitution processes and multiple processes, (Ingram, 1976).			Uses following rule to produce all combinations of phonemes: feature changing rules
Cooing—first 4 months vocalic velar or back consonantal sounds, denotes pleasure	first consonants labial most commonly /p/, /m/, /t/, and /k/	Hierarchically arranged constraints employed from 2 yrs–4 yrs.			rules for deletion and insertion
Babbling—6 months labial consonants, sound play (Ingram, 1976)	first vowels /a/, /i/, and /u/				rules for permutation and coalescence
Speech perception (in order of development) vowels presence versus	homorganic fricative acquired after stop (Jakobson, 1968)		vowel and consonant harmonization	3 yrs.—/p/, /m/, /h/, /n/, /w/	rules with variables (assimilation, dissimilation, multiple variables, exchange rules)
absence of consonant	/h/ and /w/ first sounds acquired (Ferguson & Garnica, 1975)		cluster reduction	4 yrs.—/b/, /k/, /g/, /d/, /f/, /j/	
sonorants versus stops			systematic simplification	6 yrs.—/t/, /ŋ/, /r/, /l/	Use of other aspects of phonological system such as stress contours, intonation pattern pitch changes (Schane, 1973)
palatized versus nonpalatized consonants			grammatical simplification (Smith, 1973)	7 yrs.—/tʃ/, /ʃ/, /z/, /dʒ/, /θ/	
Between sonorants				8 yrs.—/s/, /v/, /ð/	
sonorants versus continuants				8 1/2 yrs.—/ʒ/, (Sanders, 1972)	
labials versus linguals				7–10 yrs. comprehension of intonation (Cruttenden, 1974)	
stops versus spirants					
pre- versus postlinguals					
voiced versus voiceless consonants					
Between sibilants				7–12 yrs. morphophonemic development (Atkinson-King, 1973)	
liquids versus /y/ (Shvachkin, 1973)					

Note: Plus or minus six months for all age ranges reported is considered normal

Source: C. Prutting, Process: The action of moving forward progressively from one point to another on the way to completion. *Journal of Speech and Hearing Disorders* (a journal of the American Speech-Language-Hearing Association), 1979, 44, pp. 24–26. Reprinted by permission.

TABLE 3.4 The Examiner: 1–6 Months

Age (Months)	Motor	Cognition	Socialization	Communication
1	Moves limbs reflexively Lifts head while on stomach but cannot support head while body held upright Has coordinated side-to-side eye movement; stares but does not reach	Cries from distress Prefers visual patterns Remembers an object that reappears within 2½ seconds	Establishes eye contact with mother Quiets when held; adjusts body to person holding Follows own sleep schedule Smiles spontaneously	Responds to human voice, which usually has quieting effect Cries for assistance Makes pleasure sounds, quasi-resonant nuclei
2	Moves arms in circle smoothly; swipes at objects Holds head up briefly while on stomach; raises head while sitting supported but head bobs	Visually prefers face to objects, regards own hands, and follows in a circle Repeats own actions Excites in anticipation of objects	Excites when sees people; has unselective social smile Quiets self with sucking Prefers touch and oral stimulation to social stimulation Sleeps on schedule closer to rest of household	Distinguishes different (speech) sounds Makes more gutteral or "throaty" gooing
3	Controls body voluntarily Lifts head and chest while prone; holds head up with minimum bobbing while sitting supported Can swallow voluntarily Reaches and grasps; keeps hands open frequently	Attains full focus; can glance smoothly between objects Visually searches for sounds Begins exploratory play; explores own body	Exhibits gregarious behavior Visually discriminates different people and things; recognizes mother Has selective social smile Sleeps most of the night	Coos single syllable (consonant-vowel) Turns head when hears a voice Responds vocally to speech of others Makes predominately vowel sounds

TABLE 3.4 *continued*

Age (Months)	Motor	Cognition	Socialization	Communication
4	Can turn head in all directions whether body is prone or seated Still has inaccurate reach Occasionally opposes thumb and fingers, as a mitten; grasps small objects put in hand; brings objects to mouth	Localizes to sound Stares at place from which object is dropped Remembers visually for 5–7 seconds	Pays selective attention to faces: Looks longer at joyful versus angry face; discriminates different faces Looks in direction of person leaving room Smiles at notice of another baby Anticipates being lifted; laughs when played with	Babbles strings of consonants Varies pitch Imitates tones Smiles at person speaking to him
5	Sits supported for up to half an hour Rolls from stomach to back Can be easily pulled to stand Has partial thumb apposition; swaps objects from hand to hand	Begins to play Visually follows a vanishing object; recognizes familiar objects; anticipates whole object after seeing a part; is capable of 3-hour visual memory Explores objects by mouthing and touching Remembers own actions in immediate past	Reacts differently to smiling and scolding Discriminates parents and siblings from others Imitates some movements of others Frolics when played with	Vocalizes to toys Discriminates angry and friendly voices Experiments with sounds Imitates some sounds Responds to name Smiles and vocalizes to image in mirror
6	Turns head freely Sits straight when slightly supported or in chair Balances well Reaches with one arm, grasps, and brings to mouth Holds bottle Turns and twists in all directions Creeps	Looks and reaches smoothly and quickly Inspects objects Reaches to grab dropped objects	Differentiates social responses Prefers people games, such as "peek-a-boo" Feeds self finger food Explores face of person holding him	Varies volume, pitch, and rate Vocalizes pleasure and displeasure: squeals with excitement, intones displeasure

TABLE 3.5 The Experimenter: 7–12 Months

Age (Months)	Motor	Cognition	Socialization	Communication
7	Holds without palm; transfers object from hand to hand Cuts first tooth; has better chewing and jaw control; can eat some strained solids Pushes up on hands and knees; rocks	Visually searches briefly for toy that disappears Imitates a physical act if in repertoire	Resists Teases (beginning of humor)	Plays vocally Produces several sounds in one breath Listens to vocalization of others
8	Holds own bottle Uses thumb-finger apposition Manipulates objects to explore Pulls up to stand but needs help to get down Crawls	Can store color and form separately; recognizes object dimensions Prefers novel and relatively complex toys Explores shape, weight, texture, function, and properties (example: in/out)	Acts positively toward peers Is clearly attached to mother Shouts for attention	Listens selectively Recognizes some words Repeats emphasized syllable Imitates gestures and tonal quality of adult speech; echolalia
9	Stands alone briefly; gets down alone; cruises Sits unsupported, gets into and out of sitting position alone Explores with index finger Removes and replaces bottle	Recognizes object dimensions Uncovers object if observes act of hiding first Anticipates outcome of events and return of persons	Explores other babies "Performs" for family Imitates play Plays action games	Produces distinct intonational patterns Imitates coughs, hisses, tongue clicks, raspberries, etc. Uses social gestures Uses jargon

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TABLE 3.5 *continued*

Age (Months)	Motor	Cognition	Socialization	Communication
10	Crawls with bilateral leg-arm opposition Holds and drinks from cup Sits from a standing position	Points to body parts Attains a goal with trial-and-error approach Searches for hidden object but usually in a familiar place	Displays moods Helps dress and feed self	Imitates adult speech if sounds in repertoire Obeys some commands
11	Stands alone; gets up from all-fours position by pushing up Climbs up stairs Feeds self with spoon	Imitates increasingly Associates properties with objects	Seeks approval Anticipates mother's goal and tries to change it by protest or "persuasion"	Imitates inflections, rhythms, facial expressions, etc.
12	Stands alone; pushes to stand from squat Climbs up and down stairs Has complete thumb apposition; uses spoon, cup, and crayon; releases objects willfully Takes first steps with support	Can reach while looking away Uses common objects appropriately Searches in location where an object was last seen Imitates an absent model	Expresses people preferences Expresses many different emotions	Recognizes own name Follows simple motor instructions, especially if accompanied by a visual cue ("Bye-bye"); reacts to "no" intonation Speaks one or more words Practices words he knows and inflection; mixes words and jargon

TABLE 3.6 The Explorer: 12–24 Months

Age (Months)	Motor	Cognition	Socialization	Communication
15	Enjoys unceasing activity; walks with rapid runlike gait Walks a few steps backwards and sideways Carries objects in both hands or waves while walking Throws ball with elbow extension Takes off shoes and socks Scribbles lines	Imitates small motor acts	Looks for adults when left alone Likes music and dancing Pushes toys Imitates housework Plays in solitary manner Begins make-believe play	Points to clothes, persons, toys, and animals named Uses jargon and words in conversation Has four-to six-word vocabulary
18	Walks up stairs with help Walks smoothly, runs stiffly Drinks unassisted Throws ball with whole arm Throws and catches without falling Jumps with both feet off floor Turns pages Scribbles in circles Has muscle control for potty training	Recognizes pictures Recognizes self in mirror Remembers places where objects are usually located Uses a stick as a toy Imitates adult object use	Explores reactions of others; tests others Enjoys solitary play; engages in increased cooperative play from here on Pretends to feed doll	Begins to use two-word utterances Has approximately 20-word vocabulary Identifies some body parts Refers to self by name "Sings" and hums spontaneously Plays question-answer with adults

TABLE 3.6 *continued*

Age (Months)	Motor	Cognition	Socialization	Communication
21	Walks up and down stairs with help of railing or hand Jumps, runs, throws, climbs; kicks large ball; squats to play Puts shoes on part way Unzips Fits things together, such as easy puzzle Responds rhythmically to music with whole body	Knows shapes Sits alone for short periods with book Notices little objects and small sounds	Hugs spontaneously Plays near but not with other kids Likes toy telephone, doll, and truck for play	Likes rhyming games Pulls person to show something Tries to "tell" experiences Understands some personal pronouns Uses *I* and *mine*
24	Walks smoothly, watching feet Runs rhythmically but unable to start or stop smoothly Walks up and down stairs alone without alternating feet Tiptoes for a few steps Pushes tricycle Eats with fork	Matches familiar objects Comprehends *one* and *many*	Can role play in limited manner Imagines toys have life qualities; engages in pretend play that is constrained by the objects Enjoys parallel play predominately Prefers action toys Cooperates with adults in simple household tasks Orders others around Communicates feelings, desires, and interests	Has 200–300-word vocabulary, names most common everyday objects Uses short, incomplete sentences Uses some prepositions (*in, on*) and pronouns (*I, me, you*) but not always correctly Uses some regular verb endings (*-s, -ed, -ing*) and plural *s*

TABLE 3.7 The Exhibitor: 3–5 Years

Age (Years)	Motor	Cognition	Socialization	Communication
3	Walks up and down stairs without assistance; uses nonalternating step	Creates representational art: one shape represents several things	Plays in groups; talks while playing; selects with whom he'll play	Has 900–1,000-word vocabulary; creates 3–4 word sentences
	Walks without watching feet; marches to music; tiptoes 3 yards	Matches primary colors	Shares toys for short periods	Uses "sentences" with subject and verb, but simple sentence construction
	Balances momentarily on one foot	Can show two objects; understands concept of *two*	Takes turns	Plays with words and sounds
	Rides tricycle	Enjoys make-believe play; is less constrained by objects		Follows two-step commands
	Can spread with knife			Talks about the present
	Explores, dismantles, dismembers			"Swears"
4	Walks up and down stairs with alternating steps	Categorizes	Plays and cooperates with others	Has 1,500–1,600-word vocabulary
	Jumps over objects	Counts rotely to five; can show three objects; understands concept of *three*	Role plays	Asks many, many questions
	Hops on one foot	Knows primary colors		Uses increasingly more complex sentence forms
	Can copy block letters	Labels some coins		Recounts stories and the recent past
				Understands most questions about the immediate environment

TABLE 3.7 *continued*

Age (Years)	Motor	Cognition	Socialization	Communication
4				Has some difficulty answering *how* and *why* Relies on word order for interpretation
5	Has gross motor control, good body awareness; plays complex games Cuts own meat with a knife Draws well, colors in lines; creates more recognizable drawings Prints simple words Dresses without assistance Still lacks eye coordination for sustained reading Has established hand preference	Carries a rule through a series of activities Knows own right and left, but not those of others Counts to 13; can show four or five objects; understands concept of *greater than three* Accepts magic as an explanation Develops time concepts of today/tomorrow/yesterday, morning/afternoon/night, day/night Recognizes relationship of parts to whole	Plays simple games Selects some playmates based on sex Enjoys dramatic play Shows interest in group activities Plays purposefully and constructively	Has vocabulary of 2,100–2,200 words Discusses feelings Understands *before* and *after*, regardless of word order Follows three-step commands Has 90% grammar acquisition

TABLE 3.8 The Expert: The School-Age Child

Age (Years)	Motor	Cognition	Socialization	Communication
6	Has better gross motor coordination; rides bicycle Throws ball well Begins to get permanent teeth	Has longer attention span Is less distracted by additional information when problem solving Remembers and repeats three digits	Enjoys active games Is competitive Identifies with sex peers in groups Transforms egocentric reality to more complex and relative reality view	Has expressive vocabulary of 2,600 words, receptive of 20,000–24,000 words; defines by function Has many well-formed sentences of a complex nature; uses all parts of speech to some degree
8	Has longer arms, larger hands Has better manipulative skills Has nearly mature-size brain Has more permanent teeth	Knows left and right of others Understands conservation Knows differences and similarities Reads spontaneously	Enjoys an audience Learns that others have different perspectives of a third person Has allegiance to gang, but also strong need for adult support	Talks a lot Boasts, brags Verbalizes ideas and problems readily Communicates thought Demonstrates little difficulty with comparative relationship
10	Has eyes of almost mature size Has almost mature lungs and digestive and circulatory systems	Plans future actions Solves problems with only minimal physical input	Enjoys games, sports, hobbies Discovers that he may be the object of someone else's perspective	Spends lots of time talking Has good comprehension
12	Experiences "rest" before adolescent growth (girls usually taller and heavier, may have entered puberty) Begins rapid muscle growth with puberty Can be on wide range of maturational levels	Engages in abstract thought	Has different interests than those of the opposite sex	Has 50,000-word receptive vocabulary Constructs adultlike definitions

Reference: Chapter 3 - Child Development: The Developing Child Language Development, An Introduction - 2nd edition by Robert E. Owens, Jr., 1988. (Merrill) Macmillan Publishing Co., NY. pp.76,77; 82,83; 88,89; 92,93; 100. Reprinted by permission Macmillan Publishing Co.

TABLE 8
LINGUISTIC AND AUDITORY MILESTONES*

Language Milestone	*Months of Age*
1. Alerting	1
2. Social smile	1½
3. Cooing	3
4. Orient to voice	4
5. Orient to bell (looks to side)	5
6. "Ah-goo"	5
7. Razzing	5
8. Babbling	6
9. Orient to bell (looks to side, then up)	7
10. "Da da/ma ma" (inappropriately)	8
11. Gesture	9
12. Orient to bell (turns directly toward bell)	10
13. "Da da/ma ma" (Appropriately)	10
14. One word	11
15. One-step command (with gestures)	12
16. Two words	12
17. Three words	14
18. One-step command (without gestures)	15
19. Four-to-six words	15
20. Immature jargoning	15
21. Seven-to-twenty words	18
22. Mature jargoning	18
23. One body part	18
24. Three body parts	21
25. Two-word combinations	21
26. Five body parts	23
27. Fifty words	24
28. Two word sentences (noun/pronoun inappropriately and verb)	24
29. Pronouns (I, me, you, etc., inappropriately)	24

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TABLE 5.1 Pattern of Development Shown by a Language-Disordered Child and a Normally Developing Child

Language-Disordered Child			Normally Developing Child		
Age	Attainment	Example	Age	Attainment	Example
27 months	First words	this, mama, bye bye, doggie	13 months	First words	here, mama, bye bye, kitty
38 months	50-word vocabulary		17 months	50-word vocabulary	
40 months	First two-word combinations	this doggie more apple this mama more play	18 months	First two-word combinations	more juice here ball more T.V. here kitty
48 months	Later two-word combinations	Mimi purse Daddy coat block chair dolly table	22 months	Later two-word combinations	Andy shoe Mommy ring cup floor keys chair
52 months	Mean sentence length of 2.00 words		24 months	Mean sentence length of 2.00 words	
55 months	First appearance of *-ing*	Mommy eating		First appearance of *-ing*	Andy sleeping
63 months	Mean sentence length of 3.10 words		30 months	Mean sentence length 3.10 words	
66 months	First appearance of "is"	The doggie's mad		First appearance of "is"	My car's gone!
73 months	Mean sentence length of 4.10 words		37 months	Mean sentence length 4.10 words	
79 months	Mean sentence length of 4.50 words			First appearance of indirect requests	Can I have some cookies?
	First appearance of indirect requests	Can I get the ball?	40 months	Mean sentence length of 4.50 words	

From: Human Communication Disorders (1990). 3rd edition. Edited by Shames and Wiig. Macmillan Publishing Co. NY. (Chapter by Leonard) p.163. Reprinted by permission from Macmillan Publishing Co.

Appendix U

A SERVICE DELIVERY MODEL FOR SEVERELY MENTALLY/MULTIPLY IMPAIRED STUDENTS

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ASHA Convention
Boston, Massachusetts
November 21, 1988

I. INTRODUCTION

The purpose of this set of materials is to provide guidelines to speech and language pathologists in Wayne County Intermediate School District for determining appropriate communicative services for severely mentally impaired or severely multiply impaired students. This model of service delivery is intended to assist the speech pathologist with an organized means of determining:

A. What type of communication services are required?

B. Who are the most effective providers of the service?

C. How will services be provided?

D. When should services be terminated?

Communication, language, and speech are basic skills that should be woven through all curriculum areas within a special education program. However, since all of our students are severely cognitively delayed and exhibit significant communication disorders, it is difficult to determine when specifically designed instruction should be provided to these students, above and beyond the general classroom training of communication and language skills. Although comparisons of a student's mental age with receptive and expressive language age can be useful in determining a student's need for special communication training, professionals who work with the severely impaired have come to recognize the sometimes greater importance of basing judgments on behavioral observations of specific skills. These judgments become particularly critical when working with severely mentally handicapped students with sensory or physical impairment. These students are limited in their ability to respond to many test procedures, and it is only through careful observation that ability level can be assessed. Therefore, this model is based upon a checklist of observable student behaviors that follow a developmental sequence, rather than a comparison of standardized test scores.

II. THE MODEL

The decision making model was adapted from a variety of resources, including:

A. A Total Communication Checklist and Assessment, from the Early Childhood Institute at the University of Kansas.

B. Communication Rating Scales, Howard County Public School System, Ellicott City, Maryland.

C. A Transactional Approach to Early Language Training, McLean, Snyder-McLean.

Appendix U

There are four components to this decision making model. These four components are described below.

The Screening Chart

The screening chart lists observable student behaviors ranked in a developmental order that are critical to the acquisition of communication and language. There are ten questions on the screening chart. Each question is followed by a list of five observable student behaviors. If the student demonstrates at least four out of the five skills listed, the speech pathologist answers the question with a "yes" response.

The speech pathologist can utilize any of the methods listed below to obtain the information needed to complete the screening chart:

1. A language/communication skills assessment, such as:

   a) Evaluating Acquired Skills in Communication (EASIC)
   b) Callier-Azusa Scale
   c) Brigance Diagnostic Inventory of Early Development
   d) Sequenced Inventory of Communication Development (SICD)
   e) Sewall Early Education Developmental Profiles

2. Observations of the student's communication skills in the home, school, and/or community environment.

3. Information obtained from teaching staff and/or caregivers.

4. A review of student records.

Once the necessary information has been obtained, the speech pathologist will complete the Screening Chart by selecting either a "yes" or "no" response to each of the ten questions. This information will be used to determine the type and frequency of service that is most appropriate for the student.

The Summary Chart

The Summary Chart lists the ten questions from the screening chart with spaces to indicate the corresponding "yes" or "no" response. Based on the responses to these questions, the student is assigned a level. These levels are described on the Summary Chart and are based on developmental information regarding the student's abilities in the area of communicative intent.

1. Level 1 - Reactive Perlocutionary (0 - 4 months)

   A student in this category meets criteria for question one only. This indicates that the student is functioning in the 0 to 4 month range, or the reactive perlocutionary level in the development of communicative intent. At this level, student behaviors are reflexive and unintentional. Caregivers must anticipate their needs and assign meaning to the student's reactions.

2. Level 2 - Proactive Perlocutionary (4 - 8 months)

A student in this category meets criteria for items two and/or three. This indicates that the student is functioning in the 4 to 8 month range, or the proactive perlocutionary level in the development of communicative intent. The student is beginning to use facial expressions to demonstrate anticipation for routine events and to exhibit preferences for certain foods, people, or activities.

3. Level 3 - Illocutionary (8 - 14 months)

A student in this category meets criteria for any two items between numbers four through seven. This indicates that the student is functioning in the 8 to 14 month range, or the illocutionary stage in the development of communicative intent. The student conveys meaning through gestures, eye gaze, or vocalization, rather than through the use of a formal language system. An intent to communicate is observable, but the student is not currently able to efficiently utilize spoken words or an augmentative system for communication.

4. Level 4 - Locutionary (14 months and above)

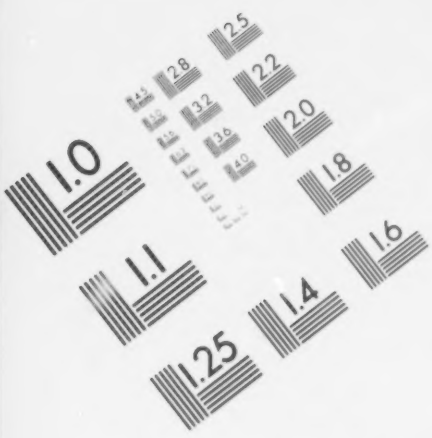
A student in this category meets criteria on at least one of the items eight through ten. This indicates that the student is functioning at 14 months and above, or the locutionary stage in the development of communicative intent. The student conveys intentions through the use of a formal language system, such as picture cards, sign language, or other symbolic communication.

Service Delivery Options

After the student is assigned a level, a recommendation can be made regarding the amount and type of service to be provided and the person best able to provide service.

At Level 1, the student is not able to benefit from the services of the speech pathologist. Language training will be planned by the teacher and implemented by the classroom staff. The speech pathologist may provide general information on structuring the classroom and/or activities to enhance early language development. For example, the speech pathologist may recommend that the teacher use portions of an established curriculum or teaching method. An early expressive language curriculum, Everyone Communicates!, by Ann Heler, is particularly appropriate for the classroom teacher to use with students functioning at this level of development.

At Level 2, the speech pathologist has monthly contact with the student. Additional consultative service is provided to the teacher and classroom staff on behalf of the student to discuss the student's individual language program.



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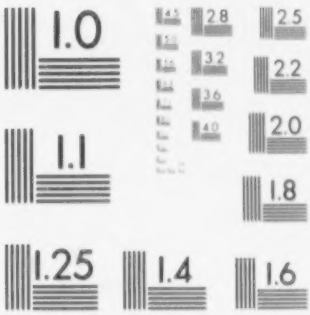

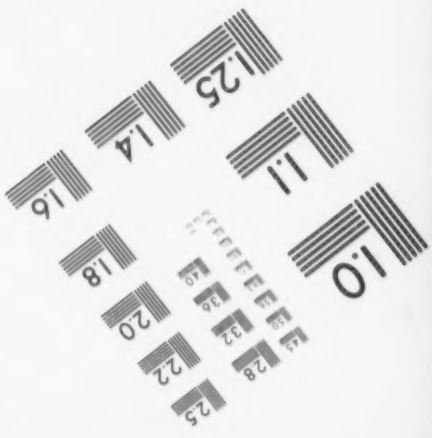

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Appendix U

Students at Level 3 are at a critical stage in communication development. The student is demonstrating intent to communicate, but has no formal means of expression. The speech pathologist would concentrate their clinical skills and time with these students, in order to help them establish a formal means of communication. The speech pathologist may choose a prescriptive or direct treatment approach to teaching the student.

At Level 4, the student has a formal means of communication. The speech pathologist may choose a prescriptive or direct treatment approach for the student who continues to need consistent training. However, the speech pathologist may also choose a consultative approach to service a student who has a well established means of communication, but does not require the consistent input and training that a student with a recently developed communication system may need.

Exit Criteria

In traditional models of speech and language service delivery in the public schools, there exists "exit criteria." Once a student has achieved a certain level of performance, or a problem has been remediated, the student is dismissed from the speech pathologist's caseload. However, severely mentally impaired and severely multiply impaired students have a lifelong handicapping condition. When is it appropriate to dismiss these students from treatment?

> "The discharge criteria used by a clinician having a communication orientation would include the following: No further, significant improvement is likely at this time in the client's ability to encode and transmit messages. Obviously the possibility of there being further significant improvement at some future time cannot be eliminated." (Communication for the Speechless, Silverman)

Using this as a guideline, the speech pathologist and other members of the IEP committee can make a decision as to whether further service will benefit this student.

The Summary Chart lists three possible reasons for exiting a student from the speech pathologist's caseload. If a student can readily communicate in a variety of settings, a strong case can be made for exiting the student. The classroom teacher would then assume responsibility for expanding vocabulary or refining the augmentative system as needed. The student's language development would continue as he/she was introduced to new learning environments or new concepts. A student can also be dismissed for lack of measurable progress. The speech pathologist should provide documentation to the IEP committee that varied approaches have been attempted. The speech pathologist has "service options" built into this model, and should use different approaches to teaching prior to recommending termination of treatment. Finally, if a student's medical, neurological, cognitive, and/or physical status precludes further progress in language development, termination of treatment may be recommended.

III. PHILOSOPHY

This approach to decision making is based upon a compilation of sources that have researched normal language development and readiness for communication training. This decision making strategy and model incorporates certain educational trends:

A. Collaborative consultation as a viable means of service.

B. Development of an expressive means of communication for the severely impaired student as a primary goal of treatment.

C. A developmentally sequenced skill inventory that focuses on the acquisition of the intent to communicate.

D. Coordination of home-school-community as learning environments. The environment must support communication training, or the student will never successfully use an augmentative system to communicate.

The following statements made by Elizabeth Lockwood, Special Education Consultant and Speech Pathologist, in May, 1981, still holds true today. "The following are prerequisites necessary to assure the success of a SMI/SXI language program:

A. The program administrator is convinced that a curriculum for the severely handicapped must emphasize language.

B. The classroom teacher believes that the attending, communication, and language skills are the basis for the curriculum and necessary for all learning including activities of daily living.

C. The speech pathologist sees him/herself as a consultant to and partner with the classroom and parent to develop basic skills.

D. All staff expect consultants to use regularly scheduled periods in the classroom to consult, to model procedures, to update goals, evaluate student progress, choose and implement augmentative communication methods and to train teachers and students in augmentative methods. No one expects the speech pathologist 'to pull a student out' to take him down the hall to work 'magic.' The magic is in the classroom where learning takes place and is reinforced."

Appendix U

SCREENING CHART

Student _____ Test Date #1 _____ Examiner #1 _____

Birthdate _____ Test Date #2 _____ Examiner #2 _____

Impairment: SMI____ SXI____ HI____ VI____ Other_____ Test Date #3 _____ Examiner #3 _____

CONSIDERATIONS: If a student has a sensory impairment, use professional discretion to determine if and/or how the student responds to the environment, given the modalities that are intact. CRITERIA: Four out of five "yes" responses under each heading to achieve a "yes" on the Summary Chart.	YES	NO	YES	NO	YES	NO
1. DOES THE STUDENT REACT TO THE ENVIRONMENT?						
A. Has reflexive movements, such as startle or rooting						
B. Attends to adult's face						
C. Makes differentiated sounds to indicate pleasure or discomfort						
D. Grasps objects reflexively						
E. Reacts to environmental stimuli by looking, localizing, facial expression, or body movement						
2. DOES THE STUDENT RESPOND TO THE ENVIRONMENT?						
A. Knows a familiar adult						
B. Shows anticipatory behaviors by facial expression or body movement						
C. Responds to own name						
D. Gains attention by using vision, touch, or vocalization						
E. Looks or searches for a dropped object						
3. DOES THE STUDENT EXHIBIT BEHAVIORS THAT FACILITATE LEARNING?						
A. Attends to objects/events involved in an interaction						
B. Shifts attention from one object or person to another						
C. Performs consistent act in response to familiar, simple schemes (squeezing a toy, shaking a noisemaker, nodding/shaking head)						
D. Shows preference for certain people, foods, activities						
E. Has intentional reach (trainer assigned meaning)						
4. DOES THE STUDENT INTERACT WITH PEOPLE/OBJECTS?						
A. Student actively makes choices between objects						
B. Indicates desire to continue a preferred activity						
C. Uses complex motor schemes (sliding, crumpling), or isolated muscle movements (blinking eyes, raising eyebrows, moving hand)						
D. Uses strategies to maintain an interaction						
E. Persists in attempts to interact with or obtain object when first attempts are unsuccessful						
5. DOES THE STUDENT EXHIBIT COGNITIVE SKILLS PREREQUISITE TO LANGUAGE DEVELOPMENT?						
A. Demonstrates understanding of object function within the context of the environment or activity						
B. Follows simple instructions, with gestural or tactile cues (if needed)						
C. Knows where items belong and can retrieve or return to proper place or indicate location by gesture or eye gaze						
D. Demonstrates knowledge of cause-effect (activates toy or mechanical device that provides an immediate response)						
E. Attends to a group activity for at least five minutes						

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STUDENT _____ Screening Chart Page 2

CONSIDERATIONS: If a student has a sensory impairment, use professional discretion to determine if and/or how the student responds to the environment, given the modalities that are intact. CRITERIA: Four out of five "yes" responses under each heading to achieve a "yes" on the Summary Chart.	YES	NO	YES	NO	YES	NO
6. DOES THE STUDENT EXHIBIT COMMUNICATIVE INTENT?						
A. Uses conventional gestures (wave, nod, give, show, point)						
B. Communicates needs/wants in a consistent manner						
C. Initiates interactions						
D. Directs adult attention to an object or activity						
E. Begins to show moods/feelings						
7. DOES THE STUDENT EXHIBIT SKILLS PREREQUISITE TO DEVELOPING A FORMAL MEANS OF COMMUNICATION?						
A. Identifies objects by name						
B. Identifies pictures of objects						
C. Has a vocabulary of 3 - 5 words						
D. Imitates unfamiliar, visible gestures						
E. Begins to understand the concept of categories						
8. DOES THE STUDENT MAKE ASSOCIATIONS?						
A. Follows directions involving a preposition						
B. Has concept of "mine"						
C. Responds to familiar situations						
D. Matches objects						
E. Understands several descriptive words (wet, cold, big)						
9. DOES THE STUDENT USE A FORMAL MEANS OF COMMUNICATION?						
A. Uses known vocabulary spontaneously						
B. Combines vocalizations with pictures, symbols, signs						
C. Labels objects on request						
D. Responds to questions using a communication system						
E. Uses communication system to ask questions						
10. DOES THE STUDENT GENERALIZE COMMUNICATION SKILLS?						
A. Combines two or more words, pictures, symbols, or signs meaningfully						
B. Uses communication system in setting outside of school						
C. Communicates with unfamiliar people						
D. Understands and follows daily routine or job assignment						
E. Exhibits waiting and turn-taking behaviors						

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Appendix U

SUMMARY CHART

SPEECH AND LANGUAGE SERVICE DELIVERY MODEL FOR SMI/SXI STUDENTS

STUDENT / DATE						
BIRTHDATE / RESPONSE	Yes	No	Yes	No	Yes	No
1. Does the student react to the environment?						
2. Does the student respond to the environment?						
3. Does the student exhibit behaviors that facilitate learning?						
4. Does the student interact with people and/or objects?						
5. Does the student exhibit skills prerequisite to language?						
6. Does the student exhibit communicative intent?						
7. Does the student exhibit skills prerequisite to formal communication?						
8. Does the student make associations?						
9. Does the student use a means of formal communication?						
10. Does the student generalize communication skills?						
LEVEL OF SERVICE						

LEVEL 1

Reactive Perlocutionary
(0 - 4 months)
Meets criteria for #1
(or less)

LEVEL 2

Proactive Perlocutionary
(4 - 8 months)
Meets criteria for items
#2 and/or #3

LEVEL 3

Illocutionary
(8 - 14 months)
Meets criteria for
at least 2 items in
#'s 4 through 7

LEVEL 4

Locutionary
(14 months and above)
Meets criteria for
at least 1 item in
#'s 8 through 10

SERVICE DELIVERY OPTIONS

IMPLEMENTATION 1

Speech and language program developed and implemented by classroom teacher. Speech pathologist may provide general suggestions for structuring classroom and/or activities to develop early communication behaviors. Speech and language services are not indicated on the IEP.

IMPLEMENTATION 2

Speech and language program developed and implemented by classroom teacher. Speech pathologist has monthly contact with student. Additional consultation with classroom staff on behalf of the student. This correlates to a consultative model.

IMPLEMENTATION 3

Speech and language program developed and implemented by teacher speech/pathologist team. Speech pathologist has weekly contact with student within classroom or community settings. This correlates to a prescriptive and/or direct model.

IMPLEMENTATION 4

Direct
or
Prescriptive
or
Consultative

EXIT CRITERIA

( ) Student has made no measurable progress over a period of 3 years. During that time, program modifications and varied approaches have been attempted unsuccessfully.

( ) Given current medical, neurological, cognitive, and/or physical factors, the student's speech and language functioning is within their expected language performance range.

( ) Student communicates successfully in a variety of settings using speech and/or an augmentative communication system.

COMMENTS_____

_____

_____

_____

_____
Speech Pathologist

_____
Date

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THE MICHIGAN DECISION MAKING STRATEGY

Appendix V

A MODEL FOR DETERMINING APPROPRIATE COMMUNICATIVE SERVICES FOR PHYSICALLY AND/OR MENTALLY HANDICAPPED CHILDREN

Presented at the Annual
Conference of the American
Speech-Language-Hearing Association
Los Angeles, California
November 23, 1981

by

Nickola W. Nelson
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Appendix V

REFERENCE CHART
FOR MAKING DECISIONS ABOUT SPEECH AND LANGUAGE PROGRAMMING FOR SEVERELY PHYSICALLY AND/OR MENTALLY HANDICAPPED CHILDREN

COGNITIVE BASES	RECEPTIVE LANGUAGE	EXPRESSIVE LANGUAGE	SOCIAL INTERACTION & PLAY
Preintentional (Birth to 8 months) Sensorimotor stages 1, 2, 3, ☐ Little evidence of goal oriented actions at beginning of period ☐ Assimilates new objects into reflex exercises ☐ Explores objects by mouthing or banging ☐ By end of period infant moves from being purely reflexive to showing the initial beginnings of goal oriented behavior ☐ Gradually develops object permanence ☐ Early: eyes focus on empty space ☐ where object was when it is dropped; fails to look under scarf for object ☐ Later: eyes follow object as it is moved; looks under scarf for hidden object	Precursors ☐ Startles to noise ☐ Orients to sound source ☐ Looks at person who calls name	Precursors ☐ Undifferentiated cry ☐ Reflexive vocalizations and comfort sounds	☐ Stares at large masses ☐ Grasps object placed in hand ☐ Makes eye contact briefly ☐ Quiets when picked up ☐ Actively seeks sound source e. objec ☐ Looks intently and shakes toy in hand ☐ Smiles at mirror image, familiar faces ☐ Sobers at sight of strangers ☐ Increases activity at sight of toy, familiar caretaker Object ☐ Works for toy/out of reach ☐ Returns to activity after interruption
Early Intentional (8 to 12 months) Sensorimotor 4 ☐ Uses familiar means to achieve novel ends (tries to repeat or prolong an effect he/she has discovered) ☐ Imitates ongoing actions already in repertoire (e.g., pattycake, kiss mommy, peekaboo) ☐ Object permanence now established (looks for object previously seen) ☐ Looks at pictures in a book with adult ☐ Stares to gain information ☐ Reacts in anticipation prior to familiar event	Precursors (Strategies used prior to actual linguistic comprehension) ☐ Looks at objects that mother looks at ☐ Acts on objects noticed ☐ Imitates ongoing action or sound if it is already within repertoire ☐ Laughs at familiar interaction sequences ☐ Inhibits action in response to "no" ☐ Responds to "bye-bye" ☐ Follows caretakers gaze to common objects when labelled	Precursors ☐ Differentiated cries ☐ Syllabic babbling ☐ Communication games ☐ Intentional action	☐ Responds to facial expressions ☐ Frequently cries when parent leaves room ☐ Drinks from cup, feeds self crackers ☐ Imitates arm movements for games like peekaboo, pattycake, imitates Object play interactin ☐ Squeezes toy to make it squeak ☐ Drops toys and watches them fall ☐ Puts small objects in and out of container ☐ Stacks rings on peg ☐ Holds crayon, imitates scribbling ☐ Cooperates in dressing ☐ Kisses, waves, holds out hands
Late Intentional (12 to 18 months) Sensorimotor 5 ☐ Uses novel means to achieve familiar ends (e.g. communicative gestures and stereotyped vocalization used to achieve adult attention, particular object, object's removal) ☐ Figures out ways to overcome some obstacles (opens door, reaches high objects)	Lexical comprehension ☐ Understands one word in some sentences when referents are present ☐ Points to objects in response to "Show me ___." (e.g. body parts) ☐ Nonverbal comprehension strategies used to respond to commands: ☐ Attend to object mentioned ☐ Give evidence of notice ☐ Do what is usually done in a situation	First words ☐ Performatives (gesture accompanies vocalization or word) ☐ Hi/bye routines ☐ Comment ☐ Request object or attention ☐ Reject ☐ Communicates immediate needs by pulling or pointing	☐ Reacts to emotions of others ☐ Solitary or onlooker play-self play ☐ Scribbles spontaneously with crayon ☐ Points to objects he/she wants and claims certain objects as own ☐ Imitates sweeping, hair combing ☐ Hugs doll, pulls toy manipulates toys appropriately

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COGNITIVE BASES	RECEPTIVE LANGUAGE	EXPRESSIVE LANGUAGE	SOCIAL INTERACTION & PLAY
Representational Thought (18-24 mo) Sensorimotor 6 ☐ Begins to replace sensorimotor grouping of previous stages with internalized problem solving using images, memories and symbols to represent actions and objects	Lexical comprehension ☐ Understanding of words when referent is not present ☐ Understanding of action verbs out of routine context; carries out two word commands, but often fails to understand three lexical elements ☐ Understanding of routine forms of questions for agent, object, locative and action Nonverbal comprehension strategies used to respond to commands: ☐ Locate the objects mentioned ☐ Give evidence of notice ☐ Do what you usually do: objects into containers, conventional use ☐ Act on the objects in the way mentioned ☐ Child as agent	Transition to two word combination ☐ New semantic roles ☐ Early: action-object relations; agent, action, object, recurrence, disappearance ☐ Later: object-object relations; location, possession, nonexistence ☐ Asks a What's that question ☐ Answers some routine questions ☐ Rapid acquisition of vocabulary ☐ Successive one word utterances ☐ Increased frequency of talking ☐ Onset of two word utterances (MLU 1.5)	☐ Parallel play (near others but not with them) ☐ Talks to self while playing ☐ Little social give and take—hugs pushes, pulls, snatches, grabs, but pays little attention to what others say or do ☐ Relates action to object or another person—washes, feeds doll in addition to self ☐ Listens to short story ☐ Demonstrates pleasure in make believe games (e.g. 2 sticks to represent "airplane")
Early Preoperations (2 to 3½ yrs) ☐ Arranges objects in patterns but not in categories ☐ Initates drawing of verticle line (by 30 mo) ☐ Imitates drawing of horizontal line and circle (by 36 mos) ☐ Matches identical objects ☐ Draws 2 or more lines imitating a cross (by 3½) ☐ Copies short line of beads by matching individual items but fails to put them in correct order, getting only adjacent pairs correct ☐ Matches similar objects ☐ Ability to represent one thing by another increases speed and range of thinking, particularly as language develops, but thinking remains tied closely to actions ☐ Thought is preconceptual; Inferences sometimes but not always correct	Lexical comprehension ☐ Accepts or rejects, confirms or denies in response to yes/no questions ☐ 2½ yrs ☐What for object ☐What-do for action ☐Where for location (place) ☐ 3 yrs. ☐Whose for possessor ☐Who for person ☐Why for cause or reason ☐How many for number ☐Understanding of gender contrasts in third person pronouns ☐ 2-3 yrs-Comprehension strategies ☐Does what is usually done ☐Probable location strategy for in, on, under, beside ☐Probable event strategy for simple active reversible sentences ☐Supplies missing information (2 years) ☐Supply explanation (3 years) ☐Infers most probable speech act in context ☐Sequence for understanding Wh - questions	Typ Age / Brown's Stage / New Development / MLU (morph) 2 ☐ I Basic semantic relations 1.75 ☐ Agent-action ☐ Existence ☐ Action-object ☐ Recurrence ☐ Agent-object ☐ Nonexistence ☐ Possessive ☐ Rejection ☐ Entity-locative ☐ Denial ☐ Action-locative ☐ Attributive ☐ II Grammatical inflections 2.25 ☐ Some articles, plurals, possessives ☐ -ing on verbs ☐ what doing? questions 2½ ☐ III Differention of sentence 2.75 ☐ Modalities ☐ Possession ☐ Number (noun plural) ☐ Locative containment and support (in, on) ☐ Temporary duration (ing) 3 ☐ IV Sentence embedding 3.50 3.50 ☐ Immediate future (gonna) ☐ Regular past -ed ☐ Inflects verb be (am, was, are)	☐ Parallel play predominates (24 mos) ☐ Dramatization, imagination and symbolic play (make believe and pretend) ☐ Takes turns ☐ Watches cartoons on TV ☐ Associative group play begins (3½ yrs) ☐ Organizes doll furniture accurately and plays imaginatively ☐ Builds bridge from model organizes personal items

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Appendix V

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COGNITIVE BASES

Late preoperations (3½ to 7 yrs)

- ☐ Applies systematic trial and error problem solving strategies to classification and seriation tasks
- ☐ Sorts set of blocks varying in size, shape and color into 2 piles on basis of single attribute (50% can do by age 3½)
- ☐ Places seven blocks varying in height in order and places 3 missing blocks in sequences (50% can do by age 4½)
- ☐ Begins differentiating open and closed shapes in drawings, and squares may have corners (by age 4½)
- ☐ Develop concepts of time and space
- ☐ Identifies one of three pictures not in the same category
- ☐ Matches pictures that "go together"
- ☐ Draws person with 2 parts
- ☐ Copies square (by age 4½)
- ☐ Cuts and pastes--may finish project next day
- ☐ Copies triangle (by age 5)
- ☐ Draws person with body, arms, legs, feet, nose and eyes

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RECEPTIVE LANGUAGE

Lexical comprehension

- ☐ Understands contrasts for topological locatives (in, on, under, beside)
- ☐ Answers how questions with manner or instrument responses ("What do we eat with")
- ☐ Comprehension of word order as cues to understand agent-object in active sentences (word order strategy)
- ☐ Responds to two-stage action commands

EXPRESSIVE LANGUAGE

Brown's Stage V (by approx. 3½ years)

- ☐ Sentence Conjoining
- ☐ Regular past - ed
- ☐ Third pers. Singular

Event relations (sequence of emergence from 3½ to 7 years)

- ☐ And (coordinate and temporal)
- ☐ Because, so (causal)
- ☐ But (contrastive)
- ☐ When (conditional)
- ☐ While (simultaneity)
- ☐ After
- ☐ Before
- ☐ Past time (ed)
- ☐ Possibility (might)

Syntactic rule emergence from 4 to 6 years

- ☐ N + cont + cop + PN/PA/loc (He's sick)
- ☐ There expletive (There is a table)
- ☐ Pos + N + V (Jim's dog bites)
- ☐ Adj + N + V (The big truck rolled)
- ☐ N + N + V (Joe and Jim race cars)
- ☐ Reflexive (He sees himself)
- ☐ S becomes S (He went because he wanted to
- ☐ S + V + indirect + N (He gave her a book)
- ☐ When S + S (When I go to town, I will buy an ice cream cone)
- ☐ Obligatory & emphatic do (He does not feel good. He does feel good)
- ☐ Noninversion of aux/modal (Where daddy is?)
- ☐ Aux/modal + aux modal (How can he can look? Is that's a rocket?)
- ☐ Continued use of double negation. Some problems in the truth value of negatives.
- ☐ Continued regularization of regular forms.

Syntactic rule emergence from 6 to 7 years

- ☐ Passive transform (The boy was hit by the girl)
- ☐ If transformation (If it rains we won't go)
- ☐ N + V + particle (I like eating)
- ☐ S/V concord (He likes candy)
- ☐ Pronominalization (John knew he would win the race. He knew John would win the race)

SOCIAL INTERACTION & PLAY

- ☐ Increased dramatization in play
- ☐ Suggests turns, bur often bossy
- ☐ Plays in group of 2 to 3 children
- ☐ Shows off
- ☐ Friendships stronger
- ☐ Plays in groups of 2 to 5
- ☐ Able to play games by rules (by age 6)
- ☐ Spends hours at one activity
- ☐ Demands more realism in play (age 7)

COGNITIVE BASES	RECEPTIVE LANGUAGE	EXPRESSIVE LANGUAGE	SOCIAL INTERACTION & PLAY
		☐ Inversion of aux/modal + main V (When's going to be the party?) ☐ *Noninversion of aux/modal* (Where she's going?)	
Concrete Operations (7 to 12 yrs) ☐Formation of series and classes takes place mentally; physical actions are internalized *as* mental actions or 'operations' ☐Classifies in two ways at once (e.g., can sort by both color and shape in matrix) ☐Still solves problems primarily through trial and error rather than establishing general rules and testing hypotheses ☐Able to correct misconceptions through discussion	☐Understanding of conditional conjunctions if and when (usual rather than logical sense) ☐Probable relation of events strategy for causal conjunctions ☐Understanding of casual conjunctions because and so (8 years) ☐Understanding of contrastive conjunctions but and although as though they mean and (8 years) ☐Contrastive conjunctions but and although (10 years)	Marks of maturity in Language ☐Longer sentences ☐More clauses per sentence - 8th graders use 150% more than 4th graders ☐Use of adverbial clauses (He was sleeping when I walked in the door) ☐Use of adjective clauses;(The man with the broken foot limped along the highway) ☐Nominals (Flying airplains is fun) ☐Sentence complements (They elected Jim president) ☐Infinitive complements (He told Jim to feed the dog) ☐Reduction of maizes and tangles (characteristic of younger children who begin a sentence which does not fulfill a communication unit and eventually drop it as if it is beyond them.) ☐Uses language to converse, persuade, tease	☐Genuine cooperation with others replaces isolated play or play 'in the company of others' ☐Reduction in imaginary play but development of theatrical entertainment ☐Makes accurate replicas and working models ☐Enjoys categorizing collections of various sorts

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SUMMARY CHART

ss: _____ DD: _____ Speech-Language Clinician: _____

Date: _____ Classroom Teacher: _____

COGNITIVE BASES	RECEPTIVE LANGUAGE	EXPRESSIVE LANGUAGE	SOCIAL INTERACTION & PLAY
Preintentional Birth to 8 months) **Sensorimotor 1, 2, 3,** ___Infant moves from being purely reflexive to showing the initial beginnings of goal oriented behavior ___Developing object permanence	___Startles to sound ___Turns to sound ___Reacts to human voice ___Responds to tone of voice	___Cry ___Reflexive Vocalizations	___Engages in interaction ___Maintains interaction ___Initiates interaction ___Indicates preference for familiar people and objects
Early Intentional (8 to 12 months) **Sensorimotor 4** ___Uses familiar means to achieve novel ends	___No word comprehension yet ___Imitates ongoing action ___Looks where parent looks	___Differentiated cries ___Syllabic babbling	___Plays nursery games ___Plays with toys
Late Intentional (12 to 18 months) **Sensorimotor 5** ___Invention of new means to achieve familiar ends	___Responds appropriately to single words in context	___Hi/bye routines ___First words ___Words used as 'perforatives' (to manipulate environment)	___Solitary or onlooker play ___Hugs doll, pulls toy
Representational (18 to 24 months) **Thought** **Sensorimotor 6** ___Begins symbolic thinking	___Understands words without context (points to pictures) ___Follows 2 word commands	___Novel one word utterances ___Asks "What's that?" ___Onset of 2 word utterances	___Parallel play
Early Preoperations (2 to 3½ yrs.) ___Thought is preconceptual ___Inference is sometimes but not always correct.	___Begins to understand Wh-questions ___Answers yes/no questions	___Two word utterances ___Basic sentences develop ___Morphological markers develop	___Symbolic play
Late Preoperations (3½ to 7 yrs.) ___Beginning of intuitive thought ___Problem solves by trial & error (not always correct)	___Points to pictures representing sentences ___Uses word order to understand agent object relationships	___Uses compound and complex sentences ___Uses language to relate experiences ___Talks about remote experiences ___Adequate voice, articulation, fluency	___Plays in small groups
Concrete Operations (7 to 12 yrs.) ___Classifies on 2 characteristics	___Understands conditional causal sentences	___More clauses per sentence ___Uses language to converse persuade, tease	___Genuine cooperative play

Instructions:
1. Place a check mark beside characteristics demonstrated (reference chart or other evaluation tools may be used as necessary).
2. Shade in areas which describe functioning (areas may be partially shaded).
3. Refer to program decision chart.

Recommendations:

...on, Silbar, Lockwood, 1981

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